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STIC Database Tracking Number: 113210

TO: Emily M Le Location: Rem 3c75 Tuesday, February 03, 2004 Art Unit: 1648 Phone: 272-0903 Serial Number: 10 / 600361	From: Jan Delaval Location: Biotech-Chem Library Remsen Building – 1A51 Phone: 272-2504 jan.delaval@uspto.gov

3D11

Search Notes

113210

Delaval, Jan

From: Le, Emily
Sent: Friday, January 30, 2004 3:36 PM
To: Delaval, Jan
Subject: RE: text search: 10/600361

Lo siento! 10/600361

-----Original Message-----
From: Delaval, Jan
Sent: Friday, January 30, 2004 3:34 PM
To: Le, Emily
Subject: RE: text search

Emily -

Serial number, please! Merci!

-----Original Message-----
From: Le, Emily
Sent: Friday, January 30, 2004 3:33 PM
To: Delaval, Jan
Subject: text search

Jan,

please provide a text search of the following: dendritic cells AND inactivated human immunodeficiency virus (HIV). Thanks!

Emily Le
Remsen, 3C35
(571) 272-0903

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Patent and Trademark Office

SEARCH REQUEST FORM

11/3210

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Type of Search

___ N.A. Sequence
___ A.A. Sequence
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✓ Bibliographic

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✓ STN
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___ SDC
___ DARC/Questel
___ Other

PTO-1590 (9-90)

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     (FILE 'HOME' ENTERED AT 10:36:24 ON 03 FEB 2004)
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     FILE 'HCAPLUS' ENTERED AT 10:36:34 ON 03 FEB 2004
               E DENDRITIC CELL/CT
               E E3+ALL
L1          529 S E8,E9
L2         7326 S E7
L3           45 S E13
L4         7836 S L1-L3
L5        11672 S DENDRITIC CELL
L6        11672 S L4,L5
               E HIV/CT
               E E3+ALL
L7         9029 S E2
               E E6+ALL
L8        12470 S E7,E8,E9,E10
L9        19620 S E6
               E E5+ALL
L10       16484 S E6
L11       36735 S E5+NT
L12         635 S L6 AND L7-L11
L13         639 S L6 AND HIV
L14         613 S L6 AND HUMAN IMMUNODEFICIEN? VIRUS
L15         798 S L12-L14
L16          32 S L15 AND INACTIV?
L17          58 S L15 AND PULS?
L18           7 S L16 AND L17
               E CD8/CT
               E E10+ALL
L19        8218 S E20
L20          84 S L15 AND L19
L21         150 S L15 AND CD8
L22         150 S L20,L21
L23          20 S L22 AND L16,L17
L24           3 S L18 AND L23
L25           4 S L18 NOT L24
L26           7 S L24,L25
L27          17 S L23 NOT L26
               SEL DN AN 6 14 15 16 17
L28           5 S E1-E15 AND L27
L29          12 S L26,L28
L30          35 S L17 NOT L23-L29
               SEL DN AN 25
L31           1 S E16-E18
L32          13 S L29,L31
L33           1 S US20040009194/PN OR US2002-390625#/AP,PRN
               E ANDRIEU J/AU
L34          95 S E3,E6,E7,E12,E13,E17
               E LU L/AU
L35         437 S E3-E26
               E LU LOUIS/AU
L36           5 S E3,E4
L37           4 S L15 AND L34-L36
L38           4 S L34 AND L35-L36
L39          19 S L32,L33,L37,L38
L40          15 S L39 AND ?ACTIV?
L41           4 S L39 NOT L40

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L40 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:39604 HCAPLUS
ED Entered STN: 16 Jan 2004
TI Methods, and compositions for a therapeutic antigen presenting cell vaccine for treatment of immunodeficiency virus
IN **Andrieu, Jean-Marie; Lu, Louis**
PA Fr.
SO U.S. Pat. Appl. Publ., 29 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K039-21
ICS A61K031-551
NCL 424208100; 514220000
CC 63 (Pharmaceuticals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004009194	A1	20040115	US 2003-600361	20030620 <--
PRAI US 2002-390625P	P	20020621 <--		

AB One aspect of this invention provides a composition capable of eliciting an immune response to an immunodeficiency virus in mammals, wherein the composition is comprised of an **inactivated** virus-pulsed antigen presenting cell. In another aspect the aforementioned composition may also contain a combination of an **inactivated** virus-pulsed antigen presenting cell and an immunodeficiency protease inhibitor. Still other other aspects of this invention provide for methods of treating mammals with an **inactivated** virus-pulsed antigen presenting cell, the vaccines related to such cells.

L40 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:747940 HCAPLUS
DN 139:394729
ED Entered STN: 24 Sep 2003
TI Presentation of Exogenous Whole **Inactivated** Simian Immunodeficiency Virus by Mature **Dendritic Cells** Induces CD4+ and **CD8**+ T-cell Responses
AU Frank, Ines; Santos, John J.; Mehlhop, Erin; Villamide-Herrera, Loreley; Santisteban, Christine; Gettie, Agegnehu; Ignatius, Ralf; Lifson, Jeffrey

D.; Pope, Melissa
CS Population Council, Center for Biomedical Research, New York, NY, USA
SO JAIDS, Journal of Acquired Immune Deficiency Syndromes (2003), 34(1), 7-19
CODEN: JJASFJ; ISSN: 1525-4135
PB Lippincott Williams & Wilkins
DT Journal
LA English
CC 15-8 (Immunochemistry)
AB Interactions between **HIV**-1 and **dendritic cells** (DCs) play an important role in the initial establishment and spread of infection and development of antiviral immunity. The authors used chemical **inactivated** aldrithiol-2 (AT-2) simian immunodeficiency virus (SIV) with functional envelope glycoproteins to study virus interactions with DCs and developed an in vitro system to evaluate the quality of SIV antigen (Ag) presentation by DCs to T cells. AT-2 SIV interacts authentically with T cells and DCs and thus allows assessment of natural SIV-specific responses. CD4+ and **CD8**+ T cells from blood or lymph nodes of SIV-infected macaques released interferon-γ (IFNγ) and proliferated in response to a variety of AT-2 SIV isolates. Responses did not vary significantly as a function of the quant. envelope glycoprotein content of the virions. Presentation of Ags derived from AT-2 SIV by DCs was more potent than presentation by comparably Ag-loaded monocytes. Interestingly, SIV-**pulsed** mature DCs stimulated both CD4+ and **CD8**+ T-cell responses, whereas immature DCs primarily stimulated CD4+ T cells. Further studies using AT-2 **inactivated** virus may help to define better the details of the virus-DC interactions critical for infection vs. induction of antiviral immune responses.
ST simian immunodeficiency virus **dendritic cell** CD4 **CD8** T lymphocyte; antigen presentation interferon
IT Cell proliferation
(T cell; presentation of exogenous whole **inactivated** simian immunodeficiency virus by mature **dendritic cells** induces CD4+ and **CD8**+ T-cell responses)
IT Antigen presentation
CD4-positive T cell
CD8-positive T cell
Dendritic cell
Macaca mulatta
Monocyte
Simian immunodeficiency virus
(presentation of exogenous whole **inactivated** simian immunodeficiency virus by mature **dendritic cells** induces CD4+ and **CD8**+ T-cell responses)
IT T cell (lymphocyte)
(proliferation; presentation of exogenous whole **inactivated** simian immunodeficiency virus by mature **dendritic cells** induces CD4+ and **CD8**+ T-cell responses)
IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(γ; presentation of exogenous whole **inactivated** simian immunodeficiency virus by mature **dendritic cells** induces CD4+ and **CD8**+ T-cell responses)
RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L40 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:620148 HCAPLUS
DN 139:196131
ED Entered STN: 13 Aug 2003
TI Induction of protective immune responses against R5 **human immunodeficiency virus** type 1 (**HIV**-1) infection in hu-PBL-SCID mice by intrasplenic immunization with **HIV-1-pulsed dendritic cells**: Possible involvement of a novel factor of human CD4+ T-cell origin
AU Yoshida, Atsushi; Tanaka, Reiko; Murakami, Tsutomu; Takahashi, Yoshiaki; Koyanagi, Yoshio; Nakamura, Masataka; Ito, Mamoru; Yamamoto, Naoki;

Tanaka, Yuetsu
CS Department of Immunology, Graduate School and Faculty of Medicine, University of the Ryukyus, Okinawa, 903-0215, Japan
SO Journal of Virology (2003), 77(16), 8719-8728
CODEN: JOVIAM; ISSN: 0022-538X
PB American Society for Microbiology
DT Journal
LA English
CC 15-8 (Immunochemistry)
Section cross-reference(s): 1, 63
AB The potential of a **dendritic cell** (DC)-based vaccine against **human immunodeficiency virus** type 1 (**HIV**-1) infection in humans was explored with SCID mice reconstituted with human peripheral blood mononuclear cells (PBMC). **HIV**-1-neg. normal human PBMC were transplanted directly into the spleens of SCID mice (hu-PBL-SCID-spl mice) together with autologous mature DCs **pulsed** with either **inactivated HIV**-1 (strain R5 or X4) or ovalbumin (OVA), followed by a booster injection 5 days later with autologous DCs **pulsed** with the same resp. antigens. Five days later, these mice were challenged i.p. with R5 **HIV**-1JR-CSF. Anal. of infection at 7 days postinfection showed that the DC-**HIV**-1-immunized hu-PBL-SCID-spl mice, irresp. of the **HIV**-1 isolate used for immunization, were protected against **HIV**-1 infection. In contrast, none of the DC-OVA-immunized mice were protected. Sera from the DC-**HIV**-1- but not the DC-OVA-immunized mice inhibited the in vitro infection of **activated** PBMC and macrophages with R5, but not X4, **HIV**-1. Upon restimulation with **HIV**-1 in vitro, the human CD4+ T cells derived from the DC-**HIV**-1-immunized mice produced a similar R5 **HIV**-1 suppressor factor. Neutralizing antibodies against human RANTES, MIP-1α, MIP-1β, alpha interferon (IFN-α), IFN-β, IFN-γ, interleukin-4 (IL-4), IL-10, IL-13, IL-16, MCP-1, MCP-3, tumor necrosis factor alpha (TNF-α), or TNF-β failed to reverse the **HIV**-1-suppressive **activity**. These results show that **inactivated HIV**-1-**pulsed** autologous DCs can stimulate splenic resident human CD4+ T cells in hu-PBL-SCID-spl mice to produce a yet-to-be-defined, novel soluble factor(s) with protective properties against R5 **HIV**-1 infection.
ST AIDS vaccine spleen **dendritic cell** CD4 T lymphocyte factor
IT Vaccines
(AIDS; a new factor involved in the induction of anti-**HIV** responses in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**)
IT Chemokine receptors
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(CCR5; a new factor involved in the induction of anti-**HIV** responses in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**)
IT Cell **activation**
(T cell; a new factor involved in the induction of anti-**HIV** responses in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**)
IT CD4-positive T cell
Dendritic cell
Human
Human immunodeficiency virus 1
Macrophage
Mononuclear cell (leukocyte)
Spleen
(a new factor involved in the induction of anti-**HIV** responses

in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**)

IT T cell (lymphocyte)
(**activation**; a new factor involved in the induction of anti-**HIV** responses in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**
)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(from **HIV**-1 infected CD4+ T lymphocytes with anti-HIV1 **activity**; a new factor involved in the induction of anti-**HIV** responses in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**
)

IT Anti-AIDS agents
(vaccines; a new factor involved in the induction of anti-**HIV** responses in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L40 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:588083 HCAPLUS
DN 139:212744
ED Entered STN: 31 Jul 2003
TI Potent immune response against **HIV**-1 and protection from virus

challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in the presence of IFN-α

AU Lapenta, Caterina; Santini, Stefano M.; Logozzi, Mariantonia; Spada, Massimo; Andreotti, Mauro; Di Pucchio, Tiziana; Parlato, Stefania; Belardelli, Filippo

CS Laboratory of Virology, Istituto Superiore di Sanita, Rome, 00161, Italy

SO Journal of Experimental Medicine (2003), 198(2), 361-367
CODEN: JEMEAV; ISSN: 0022-1007
PB Rockefeller University Press
DT Journal
LA English
CC 15-8 (Immunochemistry)

AB A major challenge of AIDS research is the development of therapeutic vaccine strategies capable of inducing the humoral and cellular arms of the immune responses against **HIV**-1. In this work, the authors evaluated the capability of DCs **pulsed** with aldrithiol-2-**inactivated HIV**-1 in inducing a protective antiviral human immune response in SCID mice reconstituted with human PBL (hu-PBL-SCID mice). Immunization of hu-PBL-SCID mice with DCs generated after exposure of monocytes to GM-CSF/IFN-α (IFN-DCs) and **pulsed** with **inactivated HIV**-1 resulted in a marked induction of human anti-**HIV**-1 antibodies, which was associated with the detection of anti-**HIV** neutralizing **activity** in the serum. This vaccination schedule also promoted the generation of a human **CD8**+ T cell response against **HIV**-1, as measured by IFN-γ Elispot anal. Notably, when the hu-PBL-SCID mice immunized with antigen-**pulsed** IFN-DCs were infected with **HIV**-1, inhibition of virus infection was observed as compared with control animals. These results suggest that IFN-DCs **pulsed** with **inactivated HIV**-1 can represent a valuable approach of immune intervention in **HIV**-1-infected patients.

ST HIV1 vaccine **dendritic cell** interferon

IT Vaccines
(AIDS; immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

IT **CD8-positive T cell**
Dendritic cell
Human
Human immunodeficiency virus 1
Lymph node
Spleen
(immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(neutralizing; immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

IT Anti-AIDS agents
(vaccines; immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(α; immune response against **HIV**-1 and protection from

virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study) (γ; immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

IT 83869-56-1, Granulocyte-macrophage colony-stimulating factor
RL: BSU (Biological study, unclassified); BIOL (Biological study) (immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in presence of IFN-α)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L40 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **2003:221333** HCAPLUS
DN **138:236437**
ED Entered STN: 21 Mar 2003
TI **Dendritic cells** and the promise of therapeutic vaccines for **human immunodeficiency virus** (**HIV**)-1
AU Walsh, Stephen R.; Bhardwaj, Nina; Gandhi, Rajesh T.
CS Division of Infectious Diseases, Department of Medicine, Massachusetts General Hospital, Boston, MA, 02114, USA
SO Current HIV Research (2003), 1(2), 205-216
CODEN: CHRUBF; ISSN: 1570-162X
PB Bentham Science Publishers Ltd.
DT Journal; General Review
LA English
CC 15-0 (Immunochemistry)
AB A review. Treatment of **human immunodeficiency virus** (**HIV**)-1 infection with potent antiretroviral

medications has provided considerable clin. benefit. However because of the limitations of current therapy, innovative approaches are needed to better control **HIV**-1 infection. Several studies have suggested that robust CD4+ T helper and **CD8**+ T cell responses may contribute to the immunol. control of **HIV**-1 infection in certain individuals. Most chronically infected patients, however, cannot control the infection and may benefit from stimulation of cellular immunity with immunotherapy. **Dendritic cells** (DCs) are potent professional antigen-presenting cells (APCs) and have a central role in directing the adaptive immune response to pathogens. The ability of DCs to stimulate naive T cells has long been thought to be crucial in initiating an effective immune response. As DCs are uniquely situated at the interface between the innate and adaptive immune systems, they are currently under intense scrutiny as potential adjuvants for vaccines in many clin. settings. Studies in healthy volunteers and patients with cancer have shown that antigen-**pulsed** DCs can boost both **CD8**+ and CD4+ T cell responses in vivo. Based on these promising findings, ex vivo antigen-**pulsed** DCs are being **actively** investigated in studies aimed at developing a therapeutic vaccine for individuals with **HIV**-1 infection.

ST review **dendritic cell** vaccine HIV1 cytokine antigen

IT Vaccines
(AIDS; **dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

IT Immunostimulants
(adjuvants; **dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

IT CD4-positive T cell
CD8-positive T cell
Dendritic cell
Human
Human immunodeficiency virus 1
(**dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

IT Cytokines
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

IT Antigens
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

IT Vaccines
(tumor; **dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

IT Anti-AIDS agents
Antitumor agents
(vaccines; **dendritic cells** and the promise of therapeutic vaccines for **HIV**-1)

RE.CNT 159 THERE ARE 159 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L40 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:2999 HCAPLUS
DN 138:121297
ED Entered STN: 03 Jan 2003
TI Therapeutic **dendritic-cell** vaccine for simian AIDS
AU Lu, Wei; Wu, Xiaoxian; Lu, Yaozeng; Guo, Weizhong; **Andrieu, Jean-Marie**
CS Institut de Recherche sur les Vaccins et l'Immunothérapie des Cancers et du Sida, Paris, Fr.
SO Nature Medicine (New York, NY, United States) (2003), 9(1), 27-32
CODEN: NAMEFI; ISSN: 1078-8956
PB Nature Publishing Group
DT Journal
LA English
CC 15-2 (Immunochemistry)
AB An effective immune response against **human immunodeficiency virus** or simian immunodeficiency virus (SIV) is critical in achieving control of viral replication. Here, the authors show in SIV-infected rhesus monkeys that an effective and durable SIV-specific cellular and humoral immunity is elicited by a vaccination with chemical **inactivated** SIV-**pulsed dendritic cells**. After 3 immunizations made at 2-wk intervals, the animals exhibited a 50-fold decrease of SIV DNA and a 1000-fold decrease of SIV RNA in peripheral blood. Such reduced viral load levels were maintained over the remaining 34 wk of the study. Mol. and cellular analyses of axillary and inguinal node lymphocytes of vaccinated monkeys revealed a

correlation between decreased SIV DNA and RNA levels and increased SIV-specific T-cell responses. Neutralizing antibody responses were augmented and remained elevated. **Inactivated** whole virus-**pulsed dendritic cell** vaccines are promising means to control diseases caused by immuno- deficiency viruses.

ST **dendritic cell inactivated** virus vaccine simian AIDS

IT Vaccines
(AIDS; **inactivated** whole virus-**pulsed dendritic cell** vaccine for simian AIDS)

IT T cell (lymphocyte)
(**activation; inactivated** whole virus-**pulsed dendritic cell** vaccine for simian AIDS)

IT Adoptive immunotherapy
Dendritic cell
Macaca mulatta
Simian immunodeficiency virus
(**inactivated** whole virus-**pulsed dendritic cell** vaccine for simian AIDS)

IT Antibodies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(neutralizing; **inactivated** whole virus-**pulsed dendritic cell** vaccine for simian AIDS)

IT Anti-AIDS agents
(vaccines; **inactivated** whole virus-**pulsed dendritic cell** vaccine for simian AIDS)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L40 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:220375 HCAPLUS
DN 136:241666
ED Entered STN: 22 Mar 2002
TI Means for regulating immune defenses
IN **Andrieu, Jean-Marie**; Lu, Wei; Achour, Amar
PA Institut Necker, Fr.
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA French
IC ICM A61K031-5415
ICS A61P031-00; A61P031-06; A61P031-18; A61P035-00
CC 1-7 (Pharmacology)
Section cross-reference(s): 15, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002022130	A2	20020321	WO 2001-FR2810	20010911
	WO 2002022130	A3	20020613		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	FR 2813792	A1	20020315	FR 2000-11567	20000912
	FR 2813792	B1	20030314		
	AU 2001091934	A5	20020326	AU 2001-91934	20010911
PRAI	FR 2000-11567	A	20000912		
	WO 2001-FR2810	W	20010911		

OS MARPAT 136:241666
AB The invention concerns the rebuilding of immune defenses. More particularly, it concerns the use of a compound capable of acting on monocytes/macrophages and/or **dendritic cells** so as to provide them with a signal inducing proliferation of lymphocytes, in particular T lymphocytes, providing thereby a pos. regulation of immune defenses in the treated organism. The **active** substance is advantageously selected among phenazine, phenoxazine and phenothiazine derivs. in particular, aminoperazine [2-amino-10-[3'-(1-methyl-4-piperazinyl)-propyl]phenothiazine]. Among the examples provided are effects of aminoperazine on immune function (T cell survival, proliferation and antiviral **activity**, cytokine production) in vitro and in **HIV**-pos. patients. Such derivs. may also be useful in treating tumors, infections and other immune deficiencies.
ST aminoperazine HIV1 T lymphocyte **dendritic cell**; immune deficiency phenothiazine deriv monocyte macrophage; antitumor infection immunity T cell aminoperazine
IT Antiviral agents
(antiviral **activity** of CD8-pos. T cells sensitized by **HIV** p24gag)
IT Drug delivery systems
(injections; phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Drug delivery systems
(lozenges; phenothiazine derivs. for rebuilding immune function via T cell proliferation)

IT Antitumor agents
(metastasis; aminoperazine for rebuilding immune function via T cell proliferation)
IT gag proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(p24gag; antiviral **activity** of CD8-pos. T cells sensitized by **HIV** p24gag)
IT Anti-AIDS agents
Antitumor agents
Apoptosis
CD4-positive T cell
CD8-positive T cell
Dendritic cell
Human
Human immunodeficiency virus 1
Immunodeficiency
Infection
Macrophage
Monocyte
T cell (lymphocyte)
(phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Cytokines
Ki-67 antigen
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Interleukin 1 receptor antagonist
Interleukin 10
Interleukin 12
Interleukin 15
Interleukin 18
Interleukin 1β
Interleukin 4
Interleukin 6
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(phenothiazine derivs. for rebuilding immune function via T cell proliferation: effect on cytokine production)
IT Viral DNA
Viral RNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(phenothiazine derivs. for rebuilding immune function via T cell proliferation: effect on proviral DNA and viral RNA in **HIV** -pos. patients)
IT T cell (lymphocyte)
(proliferation; phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Drug delivery systems
(solns.; phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Drug delivery systems
(suspensions; phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Drug delivery systems
(tablets; phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT Immunization
(vaccination; phenothiazine derivs. for rebuilding immune function via T cell proliferation combined with vaccines)
IT Transforming growth factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(β1-; phenothiazine derivs. for rebuilding immune function via T

cell proliferation: effect on cytokine production)
IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(γ; phenothiazine derivs. for rebuilding immune function via T cell proliferation: effect on cytokine production)
IT 92-82-0D, Phenazine, derivs. 92-84-2D, Phenothiazine, derivs. 135-67-1D, Phenoxazine, derivs.
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aminoperazine for rebuilding immune function via T cell proliferation)
IT 50-53-3, Chlorpromazine, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aminoperazine for rebuilding immune function via T cell proliferation: comparisons with other phenothiazines)
IT 367274-46-2
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phenothiazine derivs. for rebuilding immune function via T cell proliferation)
IT 117-89-5, Trifluoperazine 3937-85-7 107457-56-7 404825-16-7 404825-17-8 404825-18-9 404825-19-0 404825-20-3 404825-21-4 404825-22-5 404825-23-6 404825-24-7
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phenothiazine derivs. for rebuilding immune function via T cell proliferation)

L40 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:705874 HCAPLUS
DN 136:4662
ED Entered STN: 27 Sep 2001
TI In vitro **human immunodeficiency virus** eradication by autologous **CD8+** T cells expanded with **inactivated**-virus-**pulsed**-**dendritic cells**

Applicant

AU Lu, Wei; **Andrieu, Jean-Marie**
CS Laboratory of Molecular Oncology and Virology, Necker Faculty of Medicine at Saints-Peres Biomedical Center, Rene Descartes University, Paris, 75270, Fr.
SO Journal of Virology (2001), 75(19), 8949-8956
CODEN: JOVIAM; ISSN: 0022-538X
PB American Society for Microbiology
DT Journal
LA English
CC 15-10 (Immunochemistry)
Section cross-reference(s): 1
AB Despite significant immune recovery with potent highly **active** antiretroviral therapy (HAART), eradication of **human immunodeficiency virus** (**HIV**) from the bodies of infected individuals represents a challenge. The authors hypothesized that an inadequate or inappropriate signal in virus-specific antigen presentation might contribute to the persistent failure to mount efficient anti-**HIV** immunity in most **HIV**-infected individuals. Here, they conducted an in vitro study with untreated and HAART-treated **HIV** type 1 (**HIV**-1) patients which showed that **pulsing** of monocyte-derived **dendritic cells** (DC) with aldrithiol-2-**inactivated** autologous virus resulted in the expansion of virus-specific **CD8+** T cells which were capable of killing **HIV**-1-infected cells and eradicating the virus from cultured patient peripheral blood mononuclear cells independently of the disease stages and HAART response statuses of the patients. This in vitro anti-**HIV** effect was further enhanced by the **HIV** protease inhibitor indinavir (at a nonantiviral concentration), which has been shown previously to be able to up-regulate directly patient T-cell

proliferation following immune stimulation. However, following a 2-day. treatment with culture supernatant derived from immune-**activated** T cells (which mimics an in vivo environment of **HIV**-disseminated and immune-**activated** lymphoid tissues), DC lost their capacity to present de novo **inactivated** virus-derived antigens. These findings provide important information for understanding the establishment of chronic **HIV** infection and indicate a perspective for clin. use of DC-based therapeutic vaccines against **HIV**.

ST **HIV CD8** T cell virus **pulsed** **dendritic cell** HAART

IT Anti-AIDS agents
CD8-positive T cell
Dendritic cell
Human immunodeficiency virus 1
(**HIV**-1 eradication by autologous **CD8**+ T cells expanded with **inactivated** virus-**pulsed** **dendritic cells**)

IT Antigen presentation
(**HIV**-1 eradication by autologous **CD8**+ T cells expanded with **inactivated** virus-**pulsed** **dendritic cells** in relation to)

IT Anti-AIDS agents
(vaccines; **HIV**-1 eradication by autologous **CD8**+ T cells expanded with **inactivated** virus-**pulsed** **dendritic cells**)

IT 150378-17-9, Indinavir
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HIV**-1 eradication by autologous **CD8**+ T cells expanded with **inactivated** virus-**pulsed** **dendritic cells** in presence of)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L40 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:630088 HCAPLUS
DN 135:302780
ED Entered STN: 30 Aug 2001
TI Enhanced **dendritic cell**-driven proliferation and anti-**HIV activity** of CD8+ T cells by a new phenothiazine derivative, aminoperazine
AU Lu, Wei; Achour, Amar; Arlie, Marine; Cao, Li; **Andrieu, Jean-Marie**
CS Laboratory of Molecular Oncology and Virology, Necker Faculty of Medicine, Saints-Peres Biomedical Center, Rene Descartes University, Paris, 75270, Fr.
SO Journal of Immunology (2001), 167(5), 2929-2935
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
CC 15-8 (Immunochemistry)
AB T cell anergy, apoptosis, and chronic **activation** of T lymphocytes are prevailing features of **HIV** infection. The inability to develop an efficient natural antiviral **activity** in infected patients might be the consequence of a failure of the Ag presentation by **dendritic cells** (DCs) in chronically **activated** lymphoid tissues. We have identified a new phenothiazine derivative aminoperazine (APR; 2-amino-10-[3'-(1-methyl-4-piperazinyl)propyl]phenothiazine, C20H26N4S; m.w. 354.51) able to increase (ED from 0.1 to 100 nM) the Ag-specific DC-driven proliferation and differentiation of in vitro **HIV**-infected and uninfected normal donor T cells and of T cells from **HIV**-1-infected patients. The immunomodulatory effect of APR-sensitized DCs were ascribed to soluble factors derived from DCs. APR was also capable of increasing **HIV** gag-p24-specific proliferation and anti-**HIV** cytotoxic **activity** of patients' CD8+ T cells against autologous B-lymphoblastoid cell lines expressing a **HIV** gag gene, resulting in the suppression of both proviral DNA and supernatant viral RNA in the **HIV**-1-infected patients' T cell culture. This new phenothiazine derivative (APR) might be used for boosting the immune response of vaccinated individuals and for restoring the immunity of immunocompromised patients.
ST HIV1 gag protein T lymphocyte aminoperazine
IT Immune tolerance
(anergy; phenothiazine derivative, aminoperazine in anti-**HIV activity** of CD8+ T cells)
IT gag proteins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(p24gag; phenothiazine derivative, aminoperazine in anti-**HIV activity** of CD8+ T cells)
IT Apoptosis
CD8-positive T cell
Cytotoxicity
Human immunodeficiency virus 1
(phenothiazine derivative, aminoperazine in anti-**HIV activity** of CD8+ T cells)
IT Interleukin 10
Interleukin 12
Interleukin 15
Interleukin 18
Interleukin 1β
Interleukin 4
Interleukin 6
Lymphotoxin
Tumor necrosis factors
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)
(phenothiazine derivative, aminoperazine in anti-**HIV** **activity** of CD8+ T cells and the expression of)
IT Interferons
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(γ; phenothiazine derivative, aminoperazine in anti- **HIV** **activity** of CD8+ T cells and the expression of)
IT 367274-46-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phenothiazine derivative, aminoperazine in anti-**HIV** **activity** of CD8+ T cells)
IT 92-84-2D, Phenothiazine, derivs.
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(phenothiazine derivative, aminoperazine in anti-**HIV** **activity** of CD8+ T cells)
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L40 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:620226 HCAPLUS
ED Entered STN: 01 Oct 1998
TI **Dendritic cells** route **human** **immunodeficiency virus** to lymph nodes after vaginal or intravenous administration to mice
AU Masurier, Carole; Salomon, Benoit; Guettari, Nadia; Pioche, Catherine;

Lachapelle, Francois; Guigon, Martine; Klatzmann, David
CS Laboratoire de Biologie et Therapeutique des Pathologies Immunitaires, Universite Pierre et Marie Curie/CNRS ESA 70-87, Hopital Pitie-Salpetriere, Paris, 75651, Fr.
SO Journal of Virology (1998), 72(10), 7822-7829
CODEN: JOVIAM; ISSN: 0022-538X
PB American Society for Microbiology
DT Journal
LA English
AB We have developed a murine model to study the involvement of **dendritic cells** (DC) in **human immunodeficiency virus** (**HIV**) routing from an inoculation site to the lymph nodes (LN). Murine bone marrow-derived DC migrate to the draining LN within 24 h after s.c. injection. After incubation of these cells with heat-**inactivated** (Hi) **HIV** type 1 (**HIV**-1), **HIV** RNA sequences were detected in the draining LN only. Upon injection of DC **pulsed** with infectious **HIV**, the virus recovered in the draining LN was still able to productively infect human T cells. After a vaginal challenge with Hi **HIV**-1, the virus could be detected in the iliac and sacral draining LN at 24 h after injection. After an i.v. challenge, the virus could be detected in peripheral LN as soon as 30 min after injection. The specific depletion of a myeloid-related LN DC population, previously shown to take up blood macromols. and to translocate them into the LN, prevented **HIV** transport to LN. Together, our data demonstrate the critical role of DC for **HIV** routing to LN after either a vaginal or an i.v. challenge, which does not require their infection. Therfore, despite the fact that the mouse is not infectable by **HIV**, this small animal model might be useful to test preventive strategies against **HIV**.
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L40 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:503019** HCAPLUS
DN **127:107988**
ED Entered STN: 09 Aug 1997
TI Methods for in vivo T cell **activation** by antigen-pulsed dendritic cells
IN Engleman, Edgar G.; Levy, Ronald; Hsu, Frank; Benike, Claudia
PA Board of Trustees of the Leland Stanford Junior University, USA
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K035-14
ICS A61K039-02; A61K039-12; A61K039-385; A61K039-395; C12N005-08; G01N033-554
CC 15-2 (Immunochemistry)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9722349	A1	19970626	WO 1996-US19954	19961217
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, FI, GE, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9711523	A1	19970714	AU 1997-11523	19961217
PRAI	US 1995-575432		19951220		
	WO 1996-US19954		19961217		

AB The present invention relates to methods of using isolated human dendritic cells to present exogenous antigens for the induction of immune responses in vivo. In particular, it relates to the isolation of dendritic cells from human blood, exposing the cells to lymphoma-derived Igs or to proteins derived from human immunodeficiency virus (HIV) as antigens, and infusing the antigen-pulsed dendritic cells into patients to induce and/or augment an antigen-specific immune response. The methods of the invention

described herein have a wide range of applications, including, but not limited to, the clin. use of antigen-pulsed dendritic cells as vaccines and/or immunotherapeutics against cancer and infectious agents such as viruses.

ST virucide dendritic cell T cell **activation**; immunostimulant dendritic cell T cell **activation**

IT B cell (lymphocyte)
T cell (lymphocyte)
(-mediated immune response; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(antigenic; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Virus
(as antigen; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Immunoglobulins
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(as antigens; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Blood
(dendritic cell isolation from human; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Human immunodeficiency virus
(gp160 of; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Envelope proteins
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(gp160env, as antigen; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Dendritic cell
Immunostimulants
(in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Antigens
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Antitumor agents
(lymphoma; in vivo T cell **activation** by antigen-pulsed dendritic cells)

IT Antigens
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor-associated; in vivo T cell **activation** by antigen-pulsed dendritic cells)

L40 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:842985 HCAPLUS
DN 123:283435
ED Entered STN: 10 Oct 1995
TI Acutely infected Langerhans cells are more efficient than T cells in disseminating **HIV** type 1 to **activated** T cells following a short cell-cell contact
AU Ayehunie, Seyoum; Groves, Richard W.; Bruzzese, Ann-Marie; Ruprecht, Ruth

M.; Kupper, Thomas S.; Langhoff, Erik
CS Laboratory Viral Pathogenesis, Dana-Farber Cancer Institute, Boston, MA, 02115, USA
SO AIDS Research and Human Retroviruses (1995), 11(8), 877-84
CODEN: ARHRE7; ISSN: 0889-2229
PB Liebert
DT Journal
LA English
CC 15-8 (Immunochemistry)
AB Most **human immunodeficiency virus** type 1 (**HIV**-1) infections involve sexual contact and virus passage across mucosal surfaces. While Langerhans cells (LCs) and **dendritic cells** (DCs) have been implicated in mucosal infection, their role is undefined. Here we demonstrate that acutely **HIV**-1-infected LCs and DCs effectively transmit virus to uninfected, **activated** T cells. Cocultivation of these cells results in massive virus production that requires a short cell-cell contact; as little as 30 min contact time is sufficient for **HIV**-1-**pulsed** DCs to infect their target T cells. Furthermore, surface-bound virus **inactivation** by trypsin does not significantly decrease the efficiency of virus transmission by LC/DCs, suggesting rapid internalization of virus. This effective virus transfer by infected LCs and blood-derived DCs requires prior **activation** of T cells. Surprisingly, cocultivation of acutely infected T cells with uninfected, **activated** target T cells results only in low virus production, even with T cell-tropic virus. We conclude that LCs and DCs are not only important targets of **HIV** -1 infection, but may also play a key role in the early dissemination of virus to T cells they encounter in skin or lymphoid tissue.
ST HIV1 virus Langerhans cell **dendritic cell**
IT Skin, disease
(Langerhans' cell, infection, role of Langerhan's cells and **dendritic cells** in transmission of **HIV**-1 virus to T-cells)
IT Lymphocyte
(T-cell, disease, infection, role of Langerhan's cells and **dendritic cells** in transmission of **HIV**-1 virus to T-cells)
IT **Leukocyte**
(**dendritic cell**, infection; role of Langerhan's cells and **dendritic cells** in transmission of **HIV**-1 virus to T-cells)
IT **Virus, animal**
(**human immunodeficiency 1**, role of Langerhan's cells and **dendritic cells** in transmission of **HIV**-1 virus to T-cells)

L40 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:308730 HCAPLUS
DN 122:72000
ED Entered STN: 24 Jan 1995
TI Compositions and use of glucocorticoids for treating and preventing AIDS
IN **Andrieu, Jean-Marie**; Levy, Rafael; **Lu, Louis**
PA Association pour la Recherche, l'Etude le Traitement et la Prevention des Maladies Malignes du Sang (AREMAS), Fr.
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA French
IC ICM A61K031-57
CC 1-5 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	WO 9421264	A1	19940929	WO 1994-FR282	19940315
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2711920	A1	19950512	FR 1993-2966	19930315
	FR 2711920	B1	19960216		
	EP 641210	A1	19950308	EP 1994-909969	19940315
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
PRAI	FR 1993-2966		19930315		
	WO 1994-FR282		19940315		

AB At least one glucocorticoid is used to provide a drug for treating HIV infection and preventing AIDS, in particular in a patient infected with HIV-1. A pharmaceutical composition provided for this purpose includes, as the **active** principle, at least one glucocorticoid and/or a salt or other pharmacol. acceptable derivative thereof, particularly prednisone or prednisolone, in a unit dose of approx. 1 mg to 1 g. Results of HIV1-seropos. patients treated with prednisolone are presented. There was a clear increase in the number of CD4 lymphocytes and in the CD4 lymphocyte/CD8 lymphocyte ratio. There was also a reduction in all markers tested for immune **activation** (IgG, IgA, β2 microglobulin, etc.).

ST glucocorticoid AIDS treatment; HIV virus infection treatment glucocorticoid; prednisolone HIV virus infection treatment

IT Acquired immune deficiency syndrome
Immunomodulators
Pharmaceutical dosage forms
(compns. and use of glucocorticoids for treating and preventing AIDS)

IT Antigens
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CD4, CD4 lymphocyte; compns. and use of glucocorticoids for treating and preventing AIDS in relation to CD4 lymphocyte/CD8 lymphocyte ratio)

IT Antigens
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CD8, CD8 lymphocyte; compns. and use of glucocorticoids for treating and preventing AIDS in relation to CD4 lymphocyte/CD8 lymphocyte ratio)

IT Corticosteroids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gluco-, compns. and use of glucocorticoids for treating and preventing AIDS)

IT Virus, animal
(human immunodeficiency, compns. and use of glucocorticoids for treating and preventing AIDS)

IT Virus, animal
(human immunodeficiency 1, compns. and use of glucocorticoids for treating and preventing AIDS)

IT 50-02-2, Dexamethasone 50-03-3, Hydrocortisone acetate 50-04-4, Cortisone acetate 50-24-8, Prednisolone 52-21-1, Prednisolone acetate 53-36-1, Methylprednisolone acetate 67-78-7, Triamcinolone diacetate 76-25-5, Triamcinolone acetonide 83-43-2, Methylprednisolone 124-94-7, Triamcinolone 125-04-2 378-44-9, Betamethasone 514-36-3 1177-87-3, Dexamethasone acetate 1499-59-8, Dihydrocortisone acetate 1597-82-6, Paramethasone acetate 2152-44-5, Betamethasone valerate 2375-03-3 2681-16-5 3385-03-3, Flunisolide 5593-20-4, Betamethasone dipropionate 5611-51-8, Triamcinolone hexacetonide 13926-43-7 13926-44-8
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. and use of glucocorticoids for treating and preventing AIDS)

L40 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1993:668923** HCAPLUS
DN **119:268923**
ED Entered STN: 25 Dec 1993

TI Induction of **CD8**+ cytotoxic T lymphocytes by immunization with syngeneic irradiated **HIV**-1 envelope derived peptide-**pulsed dendritic cells**

AU Takahashi, Hidemi; Nakagawa, Yohko; Yokomuro, Kozo; Berzofsky, Jay A.
CS Dep. Microbiol. Immun., Nippon Med. Sch., Bunkyo-ku, 113, Japan

SO International Immunology (1993), 5(8), 849-57
CODEN: INIMEN; ISSN: 0953-8178
DT Journal
LA English
CC 15-10 (Immunochemistry)

AB Based on the evidence that **CD8**+ cytotoxic T cell (CTL) precursors do not appear to distinguish between virus-infected cells and viral peptide-**pulsed** syngeneic cells, the authors have developed methods for priming class I MHC mol. restricted **CD8**+ CTL with such peptides without using any adjuvant. The authors were able to prime in vivo such CTL immunity lasting at least 6 mo with a single i.v. injection of syngeneic 2200-3300 rad irradiated class II MHC mol. expressing splenic **dendritic cells** (DC). No foreign serum source was necessary during the **pulsing**. Interestingly, the authors could not generate significant CTL **activity** with unirradiated or low dose (<1100 rad) irradiated spleen cells. Because a) even purified DC required irradiation for optimal **activity**, b) unirradiated B cells did not significantly inhibit the immunization with DC, and c) B cell depletion did not substitute for irradiation, the effect of irradiation might be more to determine homing of the cells than to eliminate interference by B cells. I.v. immunization was much more effective than s.c. or i.p. immunization. CTL generated by this method could kill both peptide-**pulsed** syngeneic targets and targets endogenously expressing the whole gp160 gene. Moreover, **CD8**+ CTL could be primed with the minimal 10-residue core peptide (RGPGRAFVTI) for optimal presentation by class I MHC mols. as efficiently as the original p18. Apparently, DC bearing antigenic peptide may prime antigen-specific **CD8**+ CTL in vivo.

ST cytotoxic T lymphocyte **HIV** glycoprotein gp160; **dendritic cell HIV** peptide cytotoxic lymphocyte; **human immunodeficiency virus** peptide cytotoxic lymphocyte

IT Vaccines
(for **human immunodeficiency virus**, glycoprotein gp160 peptide in relation to)

IT Lymphocyte
(T-cell, cytotoxic, priming of, by immunization with **human immunodeficiency virus** envelope peptide-**pulsed dendritic cells**)

IT Spleen
(**dendritic cell, human immunodeficiency virus** envelope peptide-expressing, immunization with, cytotoxic T-lymphocyte induction by)

IT Glycoproteins, specific or class
RL: BIOL (Biological study)
(gp160env, of **human immunodeficiency virus**, peptide of, **dendritic cells** bearing, immunization with, cytotoxic T-lymphocytes induction by)

IT **Virus, animal**
(**human immunodeficiency 1**, glycoprotein gp160 of, peptide of, **dendritic cells** bearing, immunization with, cytotoxic T-lymphocytes induction by)

IT Radiation
(ionizing, cytotoxic T-lymphocyte induction by immunization with **human immunodeficiency virus** envelope peptide-**pulsed dendritic cells** in relation to)

IT 114991-28-5
RL: BIOL (Biological study)

(of glycoprotein gp160 from **human immunodeficiency virus, dendritic cell** expressing, immunization with, cytotoxic T-lymphocytes induction by)

L40 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
AN **1992:104176** HCAPLUS
DN **116:104176**
ED Entered STN: 20 Mar 1992
TI Primary proliferative and cytotoxic T-cell responses to **HIV** induced in vitro by human **dendritic cells**
AU Macatonia, S. E.; Patterson, S.; Knight, S. C.
CS Antigen Presentation Res. Group, MRC Clin. Res. Cent., Harrow/Middlesex, HA1 3UJ, UK
SO Immunology (1991), 74(3), 399-406
CODEN: IMMUAM; ISSN: 0019-2805
DT Journal
LA English
CC 15-8 (Immunochemistry)
AB In earlier studies, primary proliferative and cytotoxic T-cell (CTL) responses to influenza virus were produced in vitro by using mouse **dendritic cells** (DC) **pulsed** with virus or viral peptide as the stimulus for syngeneic T cells in 20-μL hanging-drop cultures. This system was now adapted for producing primary responses with cells from non-immune donors to produce primary proliferative and CTL responses to **human immunodeficiency virus** 1 (**HIV**) and to **HIV** peptides in vitro using cells from normal human peripheral blood. All donors in this study were laboratory personnel with no history of **HIV** infection. DC enriched from peripheral blood were exposed to **HIV** in vitro and small nos. were added to T lymphocytes. Proliferative responses to virus-infected DC were obtained after 3 days in culture. After 6 days, CTL were obtained that killed virus-infected autologous (but not allogeneic) phytohemagglutinin (PHA)-stimulated blast cells. Proliferative and CTL responses were obtained using cells from random donors expressing a spectrum of major histocompatibility complex (MHC) types but the CTL, once produced, showed killing restricted by the MHC class I type. Treatment of cultures with monoclonal antibody (mAb) to CD4-pos. cells at the beginning of culture blocked the development of both proliferative and CTL responses, but treatment after 5 days had no effect on the CTL **activity**. Treatment with MCA to **CD8**-pos. cells at the beginning of culture did not block proliferation, but treatment either before or after the 5-day culture period blocked CTL responses. Collaboration between proliferating CD4-pos. cells and **CD8**-pos. cells may thus be required to produce CTL of the **CD8** phenotype. DC exposed to **HIV** also produced CTL that killed autologous blast cells **pulsed** with gp120 envelope glycoprotein. However, DC infected with whole virus did not produce CTL that lysed target cells **pulsed** with a synthetic peptide, which included a known T-cell epitope of gp120 (representing amino acids 111-126). DC **pulsed** with gp120 were a poor stimulus for the development of CTL. In contrast, DC **pulsed** with the peptide (111-126) stimulated both proliferative and CTL responses. The latter killed not only target cells **pulsed** with the peptide itself or with gp120 but also killed virus-infected autologous blast cells. CTL were again obtained reproducibly with this peptide using donors expressing a spectrum of MHC types. Therefore, cells from donors not infected with **HIV** and who are not immunocompromised were used to identify a T-cell epitope which, in individuals of different MHC types, initiates the production of CTL which kill virus-infected, target cells. This approach should identify peptides with protective potential for vaccination purposes.
ST **HIV** peptide cytotoxic lymphocyte **dendritic cell**

IT Lymphocyte
(T-cell, cytotoxic, **human immunodeficiency virus**-specific, induction of, by whole virus- vs. viral peptide-**pulsed dendritic cells**)
IT **Leukocyte**
(**dendritic cell, human immunodeficiency virus**- or viral peptide-**pulsed**, proliferative and cytotoxic T-cell responses induction by)
IT Sialoglycoproteins
RL: BIOL (Biological study)
(gp120env, peptide of, **dendritic cells pulsed** with, of **HIV**-1 virus, proliferative and cytotoxic T-cell responses induction by)
IT **Virus, animal**
(**human immunodeficiency 1, dendritic cells pulsed** with viral peptide vs. whole, proliferative and cytotoxic T-cell responses induction by)
IT 139035-13-5
RL: BIOL (Biological study)
(**dendritic cells pulsed** with, of **HIV**-1 virus, proliferative and cytotoxic T-cell responses induction by)

=> => fil medline
FILE 'MEDLINE' ENTERED AT 11:19:27 ON 03 FEB 2004

FILE LAST UPDATED: 31 JAN 2004 (20040131/UP). FILE COVERS 1958 TO DATE.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L87 ANSWER 1 OF 15 MEDLINE on STN
AN 2003440637 MEDLINE
DN 22862988 PubMed ID: 14501788
TI Presentation of exogenous whole **inactivated** simian immunodeficiency virus by mature **dendritic cells** induces CD4+ and CD8+ T-cell responses.
AU Frank Ines; Santos John J; Mehlhop Erin; Villamide-Herrera Loreley; Santisteban Christine; Gettie Agegnehu; Ignatius Ralf; Lifson Jeffrey D; Pope Melissa
CS Center for Biomedical Research, Population Council, New York, New York 10021, USA.
NC AI47681 (NIAID)
AI52060 (NIAID)
NO1-CO-12400 (NCI)
RR00164 (NCRR)
SO JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES, (2003 Sep 1) 34 (1) 7-19.
Journal code: 100892005. ISSN: 1525-4135.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals; AIDS
EM 200310
ED Entered STN: 20030923
Last Updated on STN: 20031010
Entered Medline: 20031009
AB Interactions between **HIV**-1 and **dendritic cells** (DCs) play an important role in the initial establishment and spread of infection and development of antiviral immunity. We used chemically **inactivated** aldrithiol-2 (AT-2) simian immunodeficiency virus (SIV) with functional envelope glycoproteins to study virus interactions with DCs and developed an in vitro system to evaluate the quality of SIV antigen (Ag) presentation by DCs to T cells. AT-2 SIV interacts authentically with T cells and DCs and thus allows assessment of natural SIV-specific responses. CD4+ and CD8+ T cells from blood or lymph nodes of SIV-infected macaques released interferon-gamma (IFN gamma) and proliferated in response to a variety of AT-2 SIV isolates. Responses did not vary significantly as a function of the quantitative envelope glycoprotein content of the virions. Presentation of Ags derived from AT-2 SIV by DCs was more potent than presentation by comparably Ag-loaded monocytes. Interestingly, SIV-**pulsed** mature DCs stimulated both CD4+ and CD8+ T-cell responses, whereas immature DCs primarily stimulated CD4+ T cells. Further studies using AT-2 **inactivated** virus may help to define better the details of the virus-DC interactions critical for infection versus induction of antiviral immune responses.
CT Check Tags: Animal; Female; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
*2,2'-Dipyridyl: AA, analogs & derivatives
2,2'-Dipyridyl: PD, pharmacology
***Antigen Presentation**
*CD4-Positive T-Lymphocytes: IM, immunology
***CD8-Positive T-Lymphocytes: IM, immunology**
Cell Differentiation
Dendritic Cells: CY, cytology
***Dendritic Cells: IM, immunology**
Dendritic Cells: VI, virology
Disulfides: PD, pharmacology
Leukocytes, Mononuclear: IM, immunology
Lymph Nodes: IM, immunology
***Lymphocyte Activation**
Macaca mulatta
SAIDS Vaccines: IM, immunology
*SIV: IM, immunology
SIV: PY, pathogenicity
SIV: PH, physiology
Vaccines, Inactivated: IM, immunology
RN 2127-03-9 (2,2'-dipyridyl disulfide); 366-18-7 (2,2'-Dipyridyl)
CN 0 (Disulfides); 0 (SAIDS Vaccines); 0 (Vaccines, **Inactivated**)

L87 ANSWER 2 OF 15 MEDLINE on STN
AN 2003399669 MEDLINE
DN PubMed ID: 12928421
TI Most highly exposed seronegative men lack **HIV**-1-specific, IFN-gamma-secreting T cells.
AU Hladik Florian; Desbien Anthony; Lang Jean; Wang Lei; Ding Yan; Holte Sarah; Wilson Aaron; Xu Younong; Moerbe Micky; Schmechel Steve; McElrath M Juliana
CS Program in Infectious Diseases, Clinical Research Division, Public Health Sciences Division, Fred Hutchinson Cancer Research Center, 1100 Fairview Avenue North, D3-100, Seattle, WA 98109, USA.
NC AI 27757 (NIAID)
AI 47806 (NIAID)
AI 48017 (NIAID)
SO Journal of immunology (Baltimore, Md. : 1950), (2003 Sep 1) 171 (5)

2671-83.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200311
ED Entered STN: 20030827
Last Updated on STN: 20031218
Entered Medline: 20031117

AB Naturally acquired cellular immunity in individuals who have been exposed to **HIV**-1 but have remained uninfected may hold clues for the design of an effective **HIV** vaccine. To determine the presence and nature of such an **HIV**-1-specific immune response, we evaluated the quantity and fine specificity of **HIV**-1-reactive IFN-gamma-secreting T cells in a group of highly exposed seronegative men having sex with men. All 46 ES reported frequent unprotected anal sex with known **HIV**-1-infected partners at enrollment, and high risk activities continued in at least one-half of the volunteers for up to >6 years of observation. Despite the high frequency of unprotected anal intercourse and potential **HIV**-1 exposure, the vast majority of individuals demonstrated no or very low numbers of **HIV** -1-specific, IFN-gamma-secreting T cells. Even when **HIV**-1 epitopes were presented by peptide-**pulsed** autologous **dendritic cells** in 15 of the highest risk volunteers, **HIV**-1-specific T cells remained infrequent, and the proportion of responders was not significantly different from that in a lower risk seronegative control cohort. Only PBMC from two individuals who have remained uninfected to date exhibited distinctly positive responses. However, these responses rarely persisted over time, single epitope specificities were identified in only one volunteer, and **HIV** -1-specific memory T cell clones did not expand in vitro. **HIV** -1-specific, IFN-gamma-secreting T cells are thus unlikely to substantially contribute to resistance against infection in most exposed seronegative men having sex with men.

CT Check Tags: Human; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Adolescent
Adult
Amino Acid Sequence
Antigen Presentation
Clone Cells
Dendritic Cells: IM, immunology
Dendritic Cells: ME, metabolism
Enzyme-Linked Immunosorbent Assay: MT, methods
Enzyme-Linked Immunosorbent Assay: ST, standards
Epitope Mapping
Epitopes, T-Lymphocyte: AN, analysis
Epitopes, T-Lymphocyte: IM, immunology
***HIV Infections: IM, immunology**
HIV Infections: ME, metabolism
***HIV Seronegativity: IM, immunology**
***HIV-1: IM, immunology**
*Interferon Type II: SE, secretion
Lymphocyte Count
Middle Aged
Molecular Sequence Data
Risk-Taking
*T-Lymphocyte Subsets: IM, immunology
*T-Lymphocyte Subsets: SE, secretion
T-Lymphocyte Subsets: VI, virology
T-Lymphocytes, Cytotoxic: IM, immunology
T-Lymphocytes, Cytotoxic: SE, secretion

T-Lymphocytes, Cytotoxic: VI, virology
RN 82115-62-6 (Interferon Type II)
CN 0 (Epitopes, T-Lymphocyte)

L87 ANSWER 3 OF 15 MEDLINE on STN
AN **2003364765** MEDLINE
DN **22768196** PubMed ID: **12885891**
TI Induction of protective immune responses against R5 **human immunodeficiency virus** type 1 (**HIV**-1) infection in hu-PBL-SCID mice by intrasplenic immunization with **HIV**-1-**pulsed dendritic cells**: possible involvement of a novel factor of human CD4(+) T-cell origin.
AU Yoshida Atsushi; Tanaka Reiko; Murakami Tsutomu; Takahashi Yoshiaki; Koyanagi Yoshio; Nakamura Masataka; Ito Mamoru; Yamamoto Naoki; Tanaka Yuetsu
CS Department of Immunology, Graduate School and Faculty of Medicine, University of the Ryukyus, Nishihara, Okinawa 903-0215, Japan.
SO JOURNAL OF VIROLOGY, (2003 Aug) 77 (16) 8719-28.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200309
ED Entered STN: 20030806
Last Updated on STN: 20030924
Entered Medline: 20030923
AB The potential of a **dendritic cell** (DC)-based vaccine against **human immunodeficiency virus** type 1 (**HIV**-1) infection in humans was explored with SCID mice reconstituted with human peripheral blood mononuclear cells (PBMC). **HIV**-1-negative normal human PBMC were transplanted directly into the spleens of SCID mice (hu-PBL-SCID-spl mice) together with autologous mature DCs **pulsed** with either **inactivated HIV** -1 (strain R5 or X4) or ovalbumin (OVA), followed by a booster injection 5 days later with autologous DCs **pulsed** with the same respective antigens. Five days later, these mice were challenged intraperitoneally with R5 **HIV**-1(JR-CSF). Analysis of infection at 7 days postinfection showed that the DC-**HIV**-1-immunized hu-PBL-SCID-spl mice, irrespective of the **HIV**-1 isolate used for immunization, were protected against **HIV**-1 infection. In contrast, none of the DC-OVA-immunized mice were protected. Sera from the DC-**HIV** -1- but not the DC-OVA-immunized mice inhibited the in vitro infection of activated PBMC and macrophages with R5, but not X4, **HIV**-1. Upon restimulation with **HIV**-1 in vitro, the human CD4(+) T cells derived from the DC-**HIV**-1-immunized mice produced a similar R5 **HIV**-1 suppressor factor. Neutralizing antibodies against human RANTES, MIP-1alpha, MIP-1beta, alpha interferon (IFN-alpha), IFN-beta, IFN-gamma, interleukin-4 (IL-4), IL-10, IL-13, IL-16, MCP-1, MCP-3, tumor necrosis factor alpha (TNF-alpha), or TNF-beta failed to reverse the **HIV**-1-suppressive activity. These results show that **inactivated HIV**-1-**pulsed** autologous DCs can stimulate splenic resident human CD4(+) T cells in hu-PBL-SCID-spl mice to produce a yet-to-be-defined, novel soluble factor(s) with protective properties against R5 **HIV**-1 infection.
CT Check Tags: Animal; Support, Non-U.S. Gov't
AIDS Vaccines: IM, immunology
*CD4-Positive T-Lymphocytes: IM, immunology
Cytokines: IM, immunology
***Dendritic Cells: IM, immunology**
***HIV-1: IM, immunology**
Mice
Mice, Inbred BALB C

Mice, SCID
Neutralization Tests
*Spleen: IM, immunology
CN 0 (AIDS Vaccines); 0 (Cytokines)

L87 ANSWER 4 OF 15 MEDLINE on STN
AN **2003364691** MEDLINE
DN **22756620** PubMed ID: **12874266**
TI Potent immune response against **HIV**-1 and protection from virus challenge in hu-PBL-SCID mice immunized with **inactivated** virus-**pulsed dendritic cells** generated in the presence of IFN-alpha.
AU Lapenta Caterina; Santini Stefano M; Logozzi Mariantonia; Spada Massimo; Andreotti Mauro; Di Pucchio Tiziana; Parlato Stefania; Belardelli Filippo
CS Laboratory of Virology, Istituto Superiore di Sanita, Viale Regina Elena, 299, Rome, Italy 00161.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (2003 Jul 21) 198 (2) 361-7.
Journal code: 2985109R. ISSN: 0022-1007.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200309
ED Entered STN: 20030806
Last Updated on STN: 20030926
Entered Medline: 20030925
AB A major challenge of AIDS research is the development of therapeutic vaccine strategies capable of inducing the humoral and cellular arms of the immune responses against **HIV**-1. In this work, we evaluated the capability of DCs **pulsed** with aldrithiol-2-**inactivated HIV**-1 in inducing a protective antiviral human immune response in SCID mice reconstituted with human PBL (hu-PBL-SCID mice). Immunization of hu-PBL-SCID mice with DCs generated after exposure of monocytes to GM-CSF/IFN-alpha (IFN-DCs) and **pulsed** with **inactivated HIV**-1 resulted in a marked induction of human anti-**HIV**-1 antibodies, which was associated with the detection of anti-**HIV** neutralizing activity in the serum. This vaccination schedule also promoted the generation of a human CD8+ T cell response against **HIV**-1, as measured by IFN-gamma Elispot analysis. Notably, when the hu-PBL-SCID mice immunized with antigen-**pulsed** IFN-DCs were infected with **HIV**-1, inhibition of virus infection was observed as compared with control animals. These results suggest that IFN-DCs **pulsed** with **inactivated HIV**-1 can represent a valuable approach of immune intervention in **HIV**-1-infected patients.
CT Check Tags: Animal; Human; Support, Non-U.S. Gov't
*AIDS Vaccines: TU, therapeutic use
***Acquired Immunodeficiency Syndrome: IM, immunology**
Acquired Immunodeficiency Syndrome: PC, prevention & control
***Dendritic Cells: IM, immunology**
Dendritic Cells: TR, transplantation
Dendritic Cells: VI, virology
***HIV-1: IM, immunology**
Immunomagnetic Separation: MT, methods
*Interferon-alpha: IM, immunology
Lymphocyte Transfusion
Lymphocytes: CY, cytology
*Lymphocytes: IM, immunology
Mice
Mice, SCID
Transplantation, Heterologous: IM, immunology
***Vaccines, Inactivated: TU, therapeutic use**
CN 0 (AIDS Vaccines); 0 (Interferon-alpha); 0 (Vaccines, **Inactivated**

)

L87 ANSWER 5 OF 15 MEDLINE on STN
AN 2003357445 MEDLINE
DN 22771896 PubMed ID: 12891059
TI **Dendritic cells** generated in the presence of granulocyte-macrophage colony-stimulating factor and IFN-alpha are potent inducers of **HIV**-specific CD8 T cells.
AU Carbonneil Cedric; Aouba Albertine; Burgard Marianne; Cardinaud Sylvain; Rouzioux Christine; Langlade-Demoyen Pierre; Weiss Laurence
CS INSERM U430, Paris, France.
SO AIDS, (2003 Aug 15) 17 (12) 1731-40.
Journal code: 8710219. ISSN: 0269-9370.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200310
ED Entered STN: 20030801
Last Updated on STN: 20031008
Entered Medline: 20031007
AB OBJECTIVE: To investigate the ability of granulocyte-macrophage colony-stimulating factor (GM-CSF) and IFN-alpha to induce the differentiation of peripheral monocytes into **dendritic cells** (DC) and their ability to trigger an **HIV**-specific CD8 T-cell response. METHODS: Monocytes isolated from both seronegative controls and **HIV**-infected individuals were differentiated into DC using GM-CSF with either IL-4 or IFN-alpha for 7 days. We assessed the phenotypic characteristics and IL-12 production by flow cytometry. The ability of DC to trigger CD8 T-cell responses was assessed by means of ELISpot and cytotoxicity assays. In addition, **HIV**-1-RNA levels were measured in culture supernatants. RESULTS: Compared with control DC generated in the presence of GM-CSF and IL-4, DC generated in the presence of GM-CSF and IFN-alpha expressed higher levels of MHC class I molecules and produced similar or higher levels of IL-12 after CD40 ligation or Staphyloccus aureus Cowan stimulation. GM-CSF/IFN-alpha DC expressed low levels of CD4, CXCR4 and DC-SIGN and did not produce detectable virus during the differentiation period. **Pulsed** GM-CSF/IFN-alpha DC were found to prime CD8 T cells from **HIV**-negative controls to exert cytotoxic activity against target cells expressing **HIV** antigens. **HIV** peptide-**pulsed** GM-CSF/IFN-alpha DC promote specific IFN-gamma production by autologous CD8 T cells from **HIV**-seronegative donors. Furthermore, GM-CSF/IFN-alpha DC from **HIV**-seropositive patients efficiently present **HIV** peptides to autologous CD8 T lymphocytes. CONCLUSION: GM-CSF and IFN-alpha allow the generation of DC with high CD8 T-cell stimulating abilities. Therefore, this strategy may represent a novel approach to therapeutic vaccination in **HIV** disease.
CT Check Tags: Comparative Study; Human; Support, Non-U.S. Gov't
*Adoptive Transfer: MT, methods
CD40 Ligand: PD, pharmacology
***CD8-Positive T-Lymphocytes: IM, immunology**
Cell Differentiation
Cells, Cultured
***Dendritic Cells: IM, immunology**
Granulocyte-Macrophage Colony-Stimulating Factor: IM, immunology
*Granulocyte-Macrophage Colony-Stimulating Factor: PD, pharmacology
HIV Infections: IM, immunology
***HIV Infections: TH, therapy**
HIV-1: GE, genetics
HIV-1: IM, immunology
Interferon Type II: IM, immunology
*Interferon Type II: PD, pharmacology

Interleukin-12: IM, immunology
Interleukin-4: PD, pharmacology
Lymphocyte Activation
RNA, Viral: AN, analysis
Staphylococcus aureus
T-Lymphocytes, Cytotoxic: IM, immunology
RN 147205-72-9 (CD40 Ligand); 187348-17-0 (Interleukin-12); 207137-56-2 (Interleukin-4); 82115-62-6 (Interferon Type II); 83869-56-1 (Granulocyte-Macrophage Colony-Stimulating Factor)
CN 0 (RNA, Viral)

L87 ANSWER 6 OF 15 MEDLINE on STN
AN 2003031369 MEDLINE
DN 22426478 PubMed ID: 12538688
TI Induction of antigen-specific CTL by recombinant **HIV** trans-activating fusion protein-**pulsed** human monocyte-derived **dendritic cells**.
AU Tanaka Yoshiyuki; Dowdy Steven F; Linehan David C; Eberlein Timothy J; Goedegebuure Peter S
CS Department of Surgery, Biologic Cancer Therapy Program, and Alvin J. Siteman Cancer Center, Washington University School of Medicine, St. Louis, MO 63110,USA.
NC K08CA87018 (NCI)
R01CA68500 (NCI)
SO JOURNAL OF IMMUNOLOGY, (2003 Feb 1) 170 (3) 1291-8.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200303
ED Entered STN: 20030123
Last Updated on STN: 20030328
Entered Medline: 20030327
AB Several systems have been tested for introduction of Ags into human **dendritic cells** (DC). Most of them to date, however, are complex and possess limited efficiency. Recent advances in **HIV** trans-activating (TAT) fusion protein technology permit extremely high transduction efficiencies for a majority of mammalian cell types. Here we report our attempts to develop a simple, but highly efficient, protocol for loading of antigenic protein into DC using TAT fusion technology. A TAT-minigene fusion protein was generated, encoding both the HLA-A2-restricted influenza matrix protein-derived epitope (GILVFTFTL, Flu-M1) and a melanoma Ag gp100-derived modified epitope (YLEPGPVTV, G9(280)-9V). In addition, both a TAT-Her2/neu extracellular domain (ECD) fusion protein and a TAT-green fluorescence protein fusion protein were generated. Over 95% of DC stained positively for TAT-green fluorescence protein within 20 min of coculture. DC treated with TAT-minigene were efficiently recognized by both Flu-M1 and G9(280)-9V-specific T cells in cytotoxicity assays and IFN-gamma ELISPOT assays. In contrast, DC **pulsed** with minigene fusion protein lacking TAT were either poorly recognized or not recognized by the T cells. DC **pulsed** with TAT-minigene also efficiently induced Flu-M1-specific T cells from naive lymphocytes. Similarly, DC treated with TAT-Her2/neu ECD stimulated patient-derived lymphocytes that specifically recognized Her2/neu(+) ovarian and breast cancer cell lines. The CTL induced by TAT-Her2/neu ECD-**pulsed** DC specifically recognized the Her2/neu ECD-derived immunogenic peptide E75 (KIFGSLAFL). Our data suggest that TAT fusion proteins efficiently transduce DC and induce Ag-specific T cells. This could prove to be a useful method for treatment of infectious diseases and cancer.
CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
Cell Line

Cytotoxicity, Immunologic: GE, genetics
Dendritic Cells: CY, cytology
***Dendritic Cells: IM, immunology**
Dendritic Cells: ME, metabolism
Epitopes, T-Lymphocyte: GE, genetics
*Epitopes, T-Lymphocyte: IM, immunology
Extracellular Space: GE, genetics
Extracellular Space: PH, physiology
*Gene Products, tat: GE, genetics
Gene Products, tat: PH, physiology
***HIV-1: GE, genetics**
HIV-1: IM, immunology
HLA-A2 Antigen: IM, immunology
K562 Cells
***Lymphocyte Activation**
Lymphocyte Activation: GE, genetics
Membrane Glycoproteins: GE, genetics
Membrane Glycoproteins: PH, physiology
Monocytes: CY, cytology
*Monocytes: IM, immunology
Neoplasm Proteins: GE, genetics
Neoplasm Proteins: PH, physiology
Protein Denaturation
Protein Structure, Tertiary: GE, genetics
Receptor, erbB-2: GE, genetics
Receptor, erbB-2: PH, physiology
Recombinant Fusion Proteins: IP, isolation & purification
Recombinant Fusion Proteins: ME, metabolism
*Recombinant Fusion Proteins: PH, physiology
***T-Lymphocytes, Cytotoxic: IM, immunology**
Transduction, Genetic
Tumor Cells, Cultured
Viral Matrix Proteins: GE, genetics
Viral Matrix Proteins: PH, physiology

CN 0 (Epitopes, T-Lymphocyte); 0 (Gene Products, tat); 0 (HLA-A2 Antigen); 0 (Membrane Glycoproteins); 0 (Neoplasm Proteins); 0 (Recombinant Fusion Proteins); 0 (Viral Matrix Proteins); 0 (influenza virus membrane protein); 0 (melanocyte lineage-specific antigen gp100); EC 2.7.1.112 (Receptor, erbB-2)

L87 ANSWER 7 OF 15 MEDLINE on STN
AN 2003008183 MEDLINE
DN 22402162 PubMed ID: 12496959
TI Therapeutic **dendritic-cell** vaccine for simian AIDS.
CM Comment in: Nat Med. 2003 Jan;9(1):13-4
AU Lu Wei; Wu Xiaoxian; Lu Yaozeng; Guo Weizhong; **Andrieu Jean-Marie**
CS Institut de Recherche sur les Vaccins et l'Immunotherapie des Cancers et du Sida, Paris, France.. louis.wei-lu@biomedicale.univ-paris5.fr
SO NATURE MEDICINE, (2003 Jan) 9 (1) 27-32.
Journal code: 9502015. ISSN: 1078-8956.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200303
ED Entered STN: 20030107
Last Updated on STN: 20030319
Entered Medline: 20030318
AB An effective immune response against **human immunodeficiency virus** or simian immunodeficiency virus (SIV) is critical in achieving control of viral replication. Here, we show in SIV-infected rhesus monkeys that an effective and durable SIV-specific cellular and humoral immunity is elicited by a vaccination

with chemically **inactivated** SIV-**pulsed dendritic cells**. After three immunizations made at two-week intervals, the animals exhibited a 50-fold decrease of SIV DNA and a 1,000-fold decrease of SIV RNA in peripheral blood. Such reduced viral load levels were maintained over the remaining 34 weeks of the study. Molecular and cellular analyses of axillary and inguinal node lymphocytes of vaccinated monkeys revealed a correlation between decreased SIV DNA and RNA levels and increased SIV-specific T-cell responses. Neutralizing antibody responses were augmented and remained elevated. **Inactivated** whole virus-**pulsed dendritic cell** vaccines are promising means to control diseases caused by immuno- deficiency viruses.

CT Check Tags: Animal; Female; Human; Male; Support, Non-U.S. Gov't
*2,2'-Dipyridyl: AA, analogs & derivatives
2,2'-Dipyridyl: ME, metabolism
AIDS Vaccines: IM, immunology
AIDS Vaccines: TU, therapeutic use
Antibodies, Viral: BL, blood
CD4 Lymphocyte Count
CD4-Positive T-Lymphocytes: IM, immunology
Dendritic Cells: CY, cytology
***Dendritic Cells: IM, immunology**
Dendritic Cells: ME, metabolism
Disulfides: ME, metabolism
HIV Infections: IM, immunology
HIV Infections: TH, therapy
Immunity, Cellular
Lymph Nodes: IM, immunology
Lymph Nodes: PA, pathology
Lymph Nodes: VI, virology
Macaca mulatta
Neutralization Tests
Oxidants: ME, metabolism
RNA, Viral: AN, analysis
SAIDS Vaccines: IM, immunology
*SAIDS Vaccines: TU, therapeutic use
*SIV: IM, immunology
SIV: PH, physiology
Simian Acquired Immunodeficiency Syndrome: IM, immunology
*Simian Acquired Immunodeficiency Syndrome: TH, therapy
T-Lymphocytes, Cytotoxic: IM, immunology
Vaccination
Viral Load

RN 2127-03-9 (2,2'-dipyridyl disulfide); 366-18-7 (2,2'-Dipyridyl)

CN 0 (AIDS Vaccines); 0 (Antibodies, Viral); 0 (Disulfides); 0 (Oxidants); 0 (RNA, Viral); 0 (SAIDS Vaccines)

L87 ANSWER 8 OF 15 MEDLINE on STN

AN 2002394649 MEDLINE

DN 22121899 PubMed ID: 12131208

TI Activation of **HIV**-1 specific CD4 and CD8 T cells by human **dendritic cells**: roles for cross-presentation and non-infectious **HIV**-1 virus.

AU Larsson Marie; Fonteneau Jean-Francois; Lirvall Margareta; Haslett Patrick; Lifson Jeffrey D; Bhardwaj Nina

CS The Laboratory of Cellular Physiology and Immunology, The Rockefeller University, New York 10021, USA.

NC AI 44628 (NIAID)
AI 47742 (NIAID)
M01-RR00102 (NCRR)
NO1-CO-56000 (NCI)

SO AIDS, (2002 Jul 5) 16 (10) 1319-29.
Journal code: 8710219. ISSN: 0269-9370.

CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200302
ED Entered STN: 20020730
Last Updated on STN: 20030226
Entered Medline: 20030225
AB BACKGROUND: The CD4 T cells in mucosal subepithelia are the first cells to become infected during sexual transmission of **HIV**-1. **Dendritic cells** (DC) are located in the same area and are known to play a central role in antiviral immune responses. However, extensive viral replication, syncytia formation and cell death follows the interaction between T cells and DC previously exposed to **HIV**-1. Despite this, anti-**HIV** responses are generated that control viremia following acute infection. OBJECTIVE: The anti-**HIV**-1 cellular immune responses observed may be activated by sources other than productively infected DC. **HIV**-1 induces apoptosis both in cells it infects and in bystander cells. Furthermore, retroviral replication typically generates a predominance of defective particles. We tested whether DC exposed to antigen from either of these sources could elicit anti-**HIV** specific immune responses. DESIGN AND METHODS: Apoptotic or necrotic monocytes infected with vaccinia virus vectors encoding **HIV** antigens, a cell line with integrated **HIV** -1 and apoptotic CD4 T cells **pulsed** with non-infectious or infectious **HIV**-1 virus were used as sources of antigens to assess cross presentation by DC. Furthermore, direct DC presentation of antigen from non-infectious and infectious **HIV**-1 was examined. RESULTS: We find that dead cells expressing **HIV**-1 antigens as well as non-infectious **HIV**-1 particles can be acquired and processed by DC, leading to the activation, differentiation and expansion of viral antigen-specific CD4 and CD8 T cells from seropositive individuals. CONCLUSIONS: These sources of antigens may be critical for the generation and maintenance of anti-**HIV**-1 immunity by DC.
CT Check Tags: Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
***Antigen Presentation**
Apoptosis
*CD4-Positive T-Lymphocytes: IM, immunology
CD4-Positive T-Lymphocytes: VI, virology
***CD8-Positive T-Lymphocytes: IM, immunology**
CD8-Positive T-Lymphocytes: VI, virology
***Dendritic Cells: IM, immunology**
Dendritic Cells: PA, pathology
HIV Antigens: IM, immunology
***HIV-1: IM, immunology**
Hela Cells
Immunity, Cellular
Immunologic Memory
Lymphocyte Activation
CN 0 (**HIV** Antigens)

L87 ANSWER 9 OF 15 MEDLINE on STN
AN 2001694051 MEDLINE
DN 21605992 PubMed ID: 11738745
TI Protection against chronic infection and AIDS by an **HIV** envelope peptide-cocktail vaccine in a pathogenic SHIV-rhesus model.
AU Nehete P N; Chitta S; Hossain M M; Hill L; Bernacky B J; Baze W; Arlinghaus R B; Sastry K J
CS Department of Veterinary Sciences, The University of Texas M.D. Anderson Cancer Center, Science Park, 650 Coolwater Drive, Bastrop, TX 78602, USA.
NC AI 42694 (NIAID)
CA 16672 (NCI)
SO VACCINE, (2001 Dec 12) 20 (5-6) 813-25.

Journal code: 8406899. ISSN: 0264-410X.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200204
ED Entered STN: 20011217
Last Updated on STN: 20020413
Entered Medline: 20020412

AB Based on our prior studies in mouse, monkey, chimpanzee, and human experimental systems, we identified six peptides encoded by highly conserved regions of the **human immunodeficiency virus** type 1 (**HIV**-1) envelope gene that selectively induce cellular immune responses in the absence of anti-viral antibody production. We tested a cocktail of the six peptides as a prototype vaccine for protection from simian **human immunodeficiency virus** (SHIV) infection and acquired immunodeficiency syndrome (AIDS) in a rhesus monkey model. Three monkeys were vaccinated with the peptide cocktail in Freund's adjuvant followed by autologous **dendritic cells** (DC) **pulsed** with these peptides. All the vaccinated animals exhibited significant induction of T-cell proliferation and cytotoxic T lymphocytes (CTL) responses, but no neutralizing antibodies. Two control mock-vaccinated monkeys showed no specific immune responses. Upon challenge with the pathogenic SHIV(KU-2), both the control and vaccinated monkeys were infected, but efficient clearance of virus-infected cells was observed in all the three vaccinated animals within 14 weeks. These animals also experienced a boosting of antiviral cellular immune responses after infection, and maintained antigen-specific IFN-gamma-producing cells in circulation beyond 42 weeks post-challenge. In contrast, the two mock-vaccinated monkeys had low to undetectable cellular immune responses and maintained significant levels of viral-infected cells and infectious virus in circulation. Further, in both the control monkeys plasma viremia was detectable beyond 38 weeks post-challenge indicating chronic phase infection. In one control monkey, the CD4+ cells dropped to very low levels by 2 weeks post-challenge and became undetectable by week 39 coinciding with high plasma viremia and AIDS, which included cachexia and ataxia. These results serve as proof of principle for the effectiveness of the **HIV** envelope peptide cocktail vaccine against chronic infection and AIDS, and support the development of multivalent peptide-based vaccine as a viable strategy to induce cell-mediated immunity (CMI) for protection against **HIV** and AIDS in humans.

CT Check Tags: Animal; Female; Human; Support, U.S. Gov't, P.H.S.
AIDS Vaccines: GE, genetics
AIDS Vaccines: IM, immunology
*AIDS Vaccines: PD, pharmacology
Acquired Immunodeficiency Syndrome: IM, immunology
Acquired Immunodeficiency Syndrome: PC, prevention & control
Amino Acid Sequence
CD4 Lymphocyte Count
HIV Antibodies: BI, biosynthesis
HIV Infections: IM, immunology
HIV Infections: PC, prevention & control
HIV-1: GE, genetics
***HIV-1: IM, immunology**
HIV-1: PY, pathogenicity
Immunity, Cellular
Interferon Type II: BI, biosynthesis
Lymphocyte Activation
Macaca mulatta
Mice
SAIDS Vaccines: GE, genetics
SAIDS Vaccines: IM, immunology

*SAIDS Vaccines: PD, pharmacology
SIV: GE, genetics
*SIV: IM, immunology
SIV: PY, pathogenicity
Simian Acquired Immunodeficiency Syndrome: IM, immunology
Simian Acquired Immunodeficiency Syndrome: PC, prevention & control
T-Lymphocytes: IM, immunology
T-Lymphocytes, Cytotoxic: IM, immunology
Vaccines, Synthetic: GE, genetics
Vaccines, Synthetic: IM, immunology
Vaccines, Synthetic: PD, pharmacology
Viral Envelope Proteins: GE, genetics
Viral Envelope Proteins: IM, immunology
RN 82115-62-6 (Interferon Type II)
CN 0 (AIDS Vaccines); 0 (**HIV** Antibodies); 0 (SAIDS Vaccines); 0 (Vaccines, Synthetic); 0 (Viral Envelope Proteins)

L87 ANSWER 10 OF 15 MEDLINE on STN
AN 2001490768 MEDLINE
DN 21424479 PubMed ID: 11533158
TI In vitro **human immunodeficiency virus** eradication by autologous CD8(+) T cells expanded with **inactivated** -virus-**pulsed dendritic cells.**
AU Lu W; **Andrieu J M**
CS Laboratory of Molecular Oncology and Virology, Necker Faculty of Medicine at Saints-Peres Biomedical Center, Rene Descartes University, Paris, France.. louis.weilu@biomedicale.univ-paris5.fr
SO JOURNAL OF VIROLOGY, (2001 Oct) 75 (19) 8949-56.
Journal code: 0113724. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200110
ED Entered STN: 20010905
Last Updated on STN: 20011015
Entered Medline: 20011011
AB Despite significant immune recovery with potent highly active antiretroviral therapy (HAART), eradication of **human immunodeficiency virus** (**HIV**) from the bodies of infected individuals represents a challenge. We hypothesized that an inadequate or inappropriate signal in virus-specific antigen presentation might contribute to the persistent failure to mount efficient anti-**HIV** immunity in most **HIV**-infected individuals. Here, we conducted an in vitro study with untreated (n = 10) and HAART-treated (n = 20) **HIV** type 1 (**HIV**-1) patients which showed that **pulsing** of monocyte-derived **dendritic cells** (DC) with aldrithiol-2-**inactivated** autologous virus resulted in the expansion of virus-specific CD8(+) T cells which were capable of killing **HIV**-1-infected cells and eradicating the virus from cultured patient peripheral blood mononuclear cells independently of the disease stages and HAART response statuses of the patients. This in vitro anti-**HIV** effect was further enhanced by the **HIV** protease inhibitor indinavir (at a nonantiviral concentration), which has been shown previously to be able to up-regulate directly patient T-cell proliferation following immune stimulation. However, following a 2-day treatment with culture supernatant derived from immune-activated T cells (which mimics an in vivo environment of **HIV**-disseminated and immune-activated lymphoid tissues), DC lost their capacity to present de novo **inactivated**-virus-derived antigens. These findings provide important information for understanding the establishment of chronic **HIV** infection and indicate a perspective for clinical use of DC-based therapeutic vaccines against **HIV**.

CT Check Tags: Female; Human; Male; Support, Non-U.S. Gov't
Anti-HIV Agents: IM, immunology
Anti-HIV Agents: TU, therapeutic use
***CD8-Positive T-Lymphocytes: IM, immunology**
CD8-Positive T-Lymphocytes: PA, pathology
***Dendritic Cells: IM, immunology**
Dendritic Cells: PA, pathology
HIV Infections: DT, drug therapy
***HIV Infections: IM, immunology**
HIV Infections: PA, pathology
Immunity, Cellular
CN 0 (Anti-**HIV** Agents)

L87 ANSWER 11 OF 15 MEDLINE on STN
AN 2001464747 MEDLINE
DN 21400872 PubMed ID: 11509641
TI Enhanced **dendritic cell**-driven proliferation and anti-**HIV** activity of CD8(+) T cells by a new phenothiazine derivative, aminoperazine.
AU Lu W; Achour A; Arlie M; Cao L; **Andrieu J M**
CS Laboratory of Molecular Oncology and Virology, Necker Faculty of Medicine, Saints-Peres Biomedical Center, Rene Descartes University, Paris, France.. louis.weilu@biomedicale.univ.paris5.fr
SO JOURNAL OF IMMUNOLOGY, (2001 Sep 1) 167 (5) 2929-35.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200112
ED Entered STN: 20010820
Last Updated on STN: 20020122
Entered Medline: 20011205
AB T cell anergy, apoptosis, and chronic activation of T lymphocytes are prevailing features of **HIV** infection. The inability to develop an efficient natural antiviral activity in infected patients might be the consequence of a failure of the Ag presentation by **dendritic cells** (DCs) in chronically activated lymphoid tissues. We have identified a new phenothiazine derivative aminoperazine (APR; 2-amino-10-[3'-(1-methyl-4-piperazinyl)propyl]phenothiazine, C(20)H(26)N(4)S; m.w. 354.51) able to increase (effective dose from 0.1 to 100 nM) the Ag-specific DC-driven proliferation and differentiation of in vitro **HIV**-infected and uninfected normal donor T cells and of T cells from **HIV**-1-infected patients. The immunomodulatory effect of APR-sensitized DCs were ascribed to soluble factors derived from DCs. APR was also capable of increasing **HIV** gag-p24-specific proliferation and anti-**HIV** cytotoxic activity of patients' CD8(+) T cells against autologous B-lymphoblastoid cell lines expressing a **HIV** gag gene, resulting in the suppression of both proviral DNA and supernatant viral RNA in the **HIV**-1-infected patients' T cell culture. This new phenothiazine derivative (APR) might be used for boosting the immune response of vaccinated individuals and for restoring the immunity of immunocompromised patients.
CT Check Tags: Human; In Vitro; Support, Non-U.S. Gov't
Adjuvants, Immunologic: CH, chemistry
*Adjuvants, Immunologic: PD, pharmacology
Apoptosis
CD8-Positive T-Lymphocytes: CY, cytology
*CD8-Positive T-Lymphocytes: DE, drug effects
*CD8-Positive T-Lymphocytes: IM, immunology
Cell Division: DE, drug effects
Cell Line
Cytotoxicity, Immunologic: DE, drug effects

***Dendritic Cells: DE, drug effects**
***Dendritic Cells: IM, immunology**
Genes, gag
HIV Core Protein p24: AD, administration & dosage
HIV Core Protein p24: IM, immunology
HIV Infections: DT, drug therapy
HIV Infections: IM, immunology
HIV-1: GE, genetics
***HIV-1: IM, immunology**
Lymphocyte Activation: DE, drug effects
Phenothiazines
Piperazines
Tetradecanoylphorbol Acetate: PD, pharmacology
RN 16561-29-8 (Tetradecanoylphorbol Acetate)
CN 0 (2-amino-10-(3'-(1-methyl-4-piperazinyl)propyl)phenothiazine); 0 (Adjuvants, Immunologic); 0 (**HIV** Core Protein p24); 0 (Phenothiazines); 0 (Piperazines)

L87 ANSWER 12 OF 15 MEDLINE on STN
AN 1999244883 MEDLINE
DN 99244883 PubMed ID: 10227993
TI Induction of primary human CD8+ T lymphocyte responses in vitro using **dendritic cells.**
AU Zarling A L; Johnson J G; Hoffman R W; Lee D R
CS Department of Molecular Microbiology and Immunology, University of Missouri School of Medicine, Columbia 65212, USA.
NC 5T32 GM08396 (NIGMS)
SO JOURNAL OF IMMUNOLOGY, (1999 May 1) 162 (9) 5197-204.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199905
ED Entered STN: 19990601
Last Updated on STN: 19990601
Entered Medline: 19990520
AB The ability of two different human professional APCs, specifically macrophages (Mphi) and **dendritic cells** (DC), to stimulate primary responses in human CD8+ T lymphocytes was examined using both allogeneic and Ag-**pulsed** autologous APCs. CTL responses in CD8+ T lymphocytes isolated from **HIV**-uninfected donors were evaluated against six different **HIV** epitopes that are restricted by four different HLA alleles using autologous human PBMC-derived Mphi and DCs for primary stimulation. In a side-by-side experiment, immature DCs, but not Mphi, were able to prime a CTL response against the B14-restricted p24gag 298-306 epitope; mature DCs were also able to prime a response against this epitope. In addition, DCs were capable of priming CD8+ CTL responses against the B8-restricted p24gag 259-267 epitope. In contrast, Mphi were unable to prime strong CTL responses against other epitopes. Since the Ag-specific cytotoxic responses required subsequent rounds of restimulation before they could be detected, the ability of the allogeneic Mphi and DCs to directly prime CD8+ T lymphocyte responses without subsequent restimulation was examined. Similar to the aforementioned peptide-specific results, DCs were more efficient than Mphi in priming both allogeneic proliferative and cytotoxic responses in human CD8+ T lymphocytes. Collectively, these results promote an enhanced status for DCs in the primary stimulation of human CD8+ T lymphocytes.
CT Check Tags: Comparative Study; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
***CD8-Positive T-Lymphocytes: IM, immunology**
CD8-Positive T-Lymphocytes: ME, metabolism
Cell Line, Transformed

Cell Separation
Cytotoxicity Tests, Immunologic
***Dendritic Cells: IM, immunology**
Epitopes, T-Lymphocyte: IM, immunology
Epitopes, T-Lymphocyte: ME, metabolism
HIV: IM, immunology
HLA Antigens: GE, genetics
HLA Antigens: ME, metabolism
Histocompatibility Antigens Class I: GE, genetics
Histocompatibility Antigens Class I: ME, metabolism
Isoantigens: GE, genetics
Isoantigens: IM, immunology
***Lymphocyte Activation**
Macrophages: IM, immunology
Protein Binding: IM, immunology
T-Lymphocytes, Cytotoxic: IM, immunology
T-Lymphocytes, Cytotoxic: ME, metabolism
T-Lymphocytes, Cytotoxic: VI, virology

CN 0 (Epitopes, T-Lymphocyte); 0 (HLA Antigens); 0 (Histocompatibility Antigens Class I); 0 (Isoantigens)

L87 ANSWER 13 OF 15 MEDLINE on STN
AN 1998031752 MEDLINE
DN 98031752 PubMed ID: 9366424
TI Cultured blood **dendritic cells** retain **HIV**-1 antigen-presenting capacity for memory CTL during progressive **HIV** -1 infection.
AU Fan Z; Huang X L; Zheng L; Wilson C; Borowski L; Liebmann J; Gupta P; Margolick J; Rinaldo C
CS University of Pittsburgh Graduate School of Public Health, PA 15261, USA.
NC U01-AI-35041 (NIAID)
U01-AI-35042 (NIAID)
U01-AI-37984 (NIAID)
+
SO JOURNAL OF IMMUNOLOGY, (1997 Nov 15) 159 (10) 4973-82.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199711
ED Entered STN: 19971224
Last Updated on STN: 19971224
Entered Medline: 19971125
AB **Dendritic cells** (DC) are potent APC that may be involved in the pathogenesis of **HIV**-1 infection. We studied the APC function of DC from **HIV**-1-infected subjects that were derived from monocyte-depleted PBMC by culture in human IL-4 and human granulocyte-macrophage CSF. The cultured cells from the **HIV** -1-infected subjects had similar morphology and phenotype of mature DC (CD80 = 41 +/- 8%, CD86 = 77 +/- 5%, CD40 = 87 +/- 6%, CD1a = 1 +/- 1%) to DC cultured from seronegative subjects. The yield of these DC was lower than from **HIV**-1-seronegative subjects (4 +/- 0% vs 11 +/- 2%, $p < 0.01$), and the lower DC yields correlated with lower numbers of blood CD4+ T cells ($r = 0.60$, $p < 0.01$) and higher plasma viral load ($r = -0.49$, $p < 0.01$). DC from **HIV**-1-infected subjects were infected with recombinant vaccinia virus vectors expressing Gag, Pol, and Env and were able to stimulate equal or higher levels of MHC class I-restricted, anti-**HIV**-1 memory CTL (CTLm) than were similarly treated, autologous B lymphocyte cell lines. DC **pulsed** with peptides representing **HIV**-1 CTL epitopes stimulated higher levels of anti-**HIV** -1 CTLm responses than did DC infected with the vaccinia virus-**HIV** -1 constructs. Allogeneic, MHC class I-matched DC also stimulated anti-

HIV-1 CTLm activity in cells from **HIV**-1-infected subjects. DC from early and late stages of **HIV**-1 infection had a similar ability to activate CTLm specific for targets expressing either **HIV**-1 genes via vaccinia virus vectors or **HIV**-1 immunodominant synthetic peptides. However, DC from either early or late stages of **HIV**-1 infection could not overcome the defect in anti-**HIV**-1 CTLm response in advanced infection.

CT Check Tags: Human; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Acquired Immunodeficiency Syndrome: BL, blood
***Acquired Immunodeficiency Syndrome: IM, immunology**
Adult
***Antigen Presentation**
Cell Separation: MT, methods
Cells, Cultured
Cytotoxicity, Immunologic: DE, drug effects
***Dendritic Cells: IM, immunology**
Dendritic Cells: ME, metabolism
Disease Progression
***HIV Antigens: BL, blood**
HIV Antigens: IM, immunology
HIV Seronegativity
HIV Seropositivity: BL, blood
***HIV-1: IM, immunology**
Histocompatibility Antigens Class I: AN, analysis
Histocompatibility Testing
*Immunologic Memory
Immunologic Memory: DE, drug effects
Lymphocyte Activation
Middle Age
Oligopeptides: IM, immunology
Oligopeptides: PD, pharmacology
T-Lymphocytes, Cytotoxic: DE, drug effects
***T-Lymphocytes, Cytotoxic: IM, immunology**

CN 0 (**HIV** Antigens); 0 (Histocompatibility Antigens Class I); 0 (Oligopeptides)

L87 ANSWER 14 OF 15 MEDLINE on STN
AN 97265565 MEDLINE
DN 97265565 PubMed ID: 9111471
TI Primary proliferative responses to peptides of **HIV** Gag p24.
AU Bedford P A; Clarke L B; Hastings G Z; Knight S C
CS Antigen Presentation Research Group, Imperial College School of Medicine, Northwick Park Institute for Medical Research, Harrow, England, U.K.
SO JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES AND HUMAN RETROVIROLOGY, (1997 Apr 1) 14 (4) 301-6.
Journal code: 9501482. ISSN: 1077-9450.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199705
ED Entered STN: 19970514
Last Updated on STN: 19970514
Entered Medline: 19970506
AB Primary proliferative responses can be initiated by adding **dendritic cells pulsed** with antigen to autologous T cells in 20-microliter hanging drop cultures. To identify primary T-cell epitopes of **HIV** gag, a series of 23 overlapping peptides, 15 amino acids long, spanning the p24 region were used. Significant proliferative responses were induced in cells from healthy **HIV**-negative donors by 11 of these peptides. One of two peptides that bound human leukocyte antigen (HLA)-A *0201 in a peptide-binding

assay using the antigen-processing defective cell line T2 also induced a primary proliferative response. Primary T-cell proliferation was seen in response to some peptides of gag that have not previously been identified as T-cell epitopes in cells from infected individuals. These epitopes might be useful not only for vaccines in antigenically naive individuals but also might increase the breadth of immune responses in seropositive patients.

CT Check Tags: Human; In Vitro
Amino Acid Sequence
HIV Core Protein p24: CH, chemistry
***HIV Core Protein p24: IM, immunology**
HIV Seronegativity
***Lymphocyte Activation**
Molecular Sequence Data
*Peptides: IM, immunology
***T-Lymphocytes, Cytotoxic: IM, immunology**

CN 0 (**HIV** Core Protein p24); 0 (Peptides)

L87 ANSWER 15 OF 15 MEDLINE on STN
AN 94300111 MEDLINE
DN 94300111 PubMed ID: 8027569
TI Generation of antigen-specific CD8+ CTLs from naive precursors.
AU Mehta-Damani A; Markowicz S; Engleman E G
CS Department of Pathology, Stanford University School of Medicine, CA 94305.
NC AI34313 (NIAID)
HL33811 (NHLBI)
SO JOURNAL OF IMMUNOLOGY, (1994 Aug 1) 153 (3) 996-1003.
Journal code: 2985117R. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199408
ED Entered STN: 19940818
Last Updated on STN: 19970203
Entered Medline: 19940809

AB Class I MHC-restricted CTLs are an important component of the host immune response against viral infections, and CTL effectors can often be isolated from infected individuals. However, the mechanism responsible for the induction of CTLs is incompletely understood because, in part, of the difficulty in generating such cells in vitro from naive precursors. In the present study we have used human peripheral blood **dendritic cells** (DCs), devoid of CD4+ T cells, to sensitize naive CD8+ T cells to exogenous Ags, resulting in the generation of Ag specific CTL effectors. With this system, Ag-specific CTL lines were generated to a complex glycoprotein, keyhole limpet hemocyanin, and to multiple small (9-15 amino acids) synthetic peptides derived from conserved regions of the **HIV**-1 gag and envelope proteins. The **HIV**-1-specific CTLs demonstrated potent HLA class I restricted killing of both Ag **pulsed** and virally infected target cells. In contrast to Ag-**pulsed** DCs, Ag-**pulsed** monocytes failed to sensitize CTL precursors although they could be used as feeders for purposes of CTL expansion and as target cells in cytolytic assays. With the use of the system described herein, a detailed analysis of the primary human T cell response to foreign Ags is now feasible, and CTL of desired specificity can be generated for potential clinical use in adoptive immunotherapy protocols.

CT Check Tags: Human; In Vitro; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
Antigen-Presenting Cells: IM, immunology
Antigens, CD8: AN, analysis
Cell Separation
Cells, Cultured

Cytotoxicity, Immunologic
Dendritic Cells: IM, immunology
HIV Antigens: IM, immunology
HIV-1: IM, immunology
Immunity, Cellular
Macrophages: IM, immunology
Peptides: IM, immunology
*T-Lymphocyte Subsets: IM, immunology
***T-Lymphocytes, Cytotoxic: IM, immunology**
CN 0 (Antigens, CD8); 0 (**HIV** Antigens); 0 (Peptides)

=> => => d all 27 28 29 35 36

L98 ANSWER 27 OF 47 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:437885 BIOSIS
DN PREV200200437885
TI Differential transmission of **human immunodeficiency virus** type 1 by distinct subsets of effector **dendritic cells**.
AU Sanders, Rogier W.; de Jong, Esther C.; Baldwin, Christopher E.; Schuitemaker, Joost H. N.; Kapsenberg, Martien L.; Berkhout, Ben [Reprint author]
CS Department of Human Retrovirology, Academic Medical Center, University of Amsterdam, Meibergdreef 15, 1105 AZ, Amsterdam, Netherlands
b.berkhout@amc.uva.nl
SO Journal of Virology, (August, 2002) Vol. 76, No. 15, pp. 7812-7821. print.
CODEN: JOVIAM. ISSN: 0022-538X.
DT Article
LA English
ED Entered STN: 14 Aug 2002
Last Updated on STN: 14 Aug 2002
AB **Dendritic cells** (DC) support **human immunodeficiency virus** type 1 (**HIV**-1) transmission by capture of the virus particle in the mucosa and subsequent transport to the draining lymph node, where **HIV**-1 is presented to CD4+ Th cells. Virus transmission involves a high-affinity interaction between the DC-specific surface molecule DC-SIGN and the viral envelope glycoprotein gp120 and subsequent internalization of the virus, which remains infectious. The mechanism of viral transmission from DC to T cells is currently unknown. Sentinel immature DC (iDC) develop into Th1-promoting effector DC1 or Th2-promoting DC2, depending on the activation signals. We studied the ability of these effector DC subsets to support **HIV**-1 transmission in vitro. Compared with iDC, virus transmission is greatly upregulated for the DC1 subset, whereas DC2 cells are **inactive**. Increased transmission by DC1 correlates with increased expression of ICAM-1, and blocking studies confirm that ICAM-1 expression on DC is important for **HIV** transmission. The ICAM-1-LFA-1 interaction is known to be important for immunological cross talk between DC and T cells, and our results indicate that this cell-cell contact is exploited by **HIV**-1 for efficient transmission.
CC Cytology - Animal 02506
Biochemistry studies - General 10060
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Virology - Animal host viruses 33506
Immunology - General and methods 34502
Medical and clinical microbiology - Virology 36006
IT Major Concepts
Biochemistry and Molecular Biophysics; Immune System (Chemical Coordination and Homeostasis); Infection
IT Parts, Structures, & Systems of Organisms
CD4 positive T cells: immune system; **dendritic cells**

: immune system; lymph node: blood and lymphatics, immune system
ORGN Classifier
Retroviridae 03305
Super Taxa
DNA and RNA Reverse Transcribing Viruses; Viruses; Microorganisms
Organism Name
human immunodeficiency virus-1: pathogen
Taxa Notes
DNA and RNA Reverse Transcribing Viruses, Microorganisms, Viruses

L98 ANSWER 28 OF 47 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:215999 BIOSIS
DN PREV200200215999
TI Infectious and whole **inactivated** simian immunodeficiency viruses interact similarly with primate **dendritic cells** (DCs): Differential intracellular fate of virions in mature and immature DCs.
AU Frank, I.; Piatak, M., Jr.; Stoessel, H.; Romani, N.; Bonnyay, D.; Lifson, J. D.; Pope, M. [Reprint author]
CS Population Council, Center for Biomedical Research, 1230 York Ave., New York, NY, 10021, USA
mpope@popcbr.rockefeller.edu
SO Journal of Virology, (March, 2002) Vol. 76, No. 6, pp. 2936-2951. print.
CODEN: JOVIAM. ISSN: 0022-538X.
DT Article
LA English
ED Entered STN: 27 Mar 2002
Last Updated on STN: 27 Mar 2002
AB As potential targets for **human immunodeficiency virus** type 1 and simian immunodeficiency virus (**HIV**-1 and SIV), **dendritic cells** (DCs) likely play a significant role in the onset and spread of infection as well as in the induction of antiviral immunity. Using the SIV-macaque system to study the very early events in DC-virus interactions, we compared chemically **inactivated** SIV having conformationally and functionally intact envelope glycoproteins (2,2'-dithiodipyridine (AT-2) SIV) to infectious and heat-treated SIV. Both human and macaque DCs interact similarly with SIV without detectable effects on DC viability, phenotype, or endocytic function. As assessed by measuring cell-associated viral RNA, considerable amounts of virus are captured by the DCs and this is reduced when the virus is heat treated or derived from a strain that expresses low levels of envelope glycoprotein. Immunostaining for SIV proteins and electron microscopy indicated that few intact virus particles are retained at the periphery of the endocytically active, immature DCs. This contrasts with a perinuclear localization of numerous virions in large vesicular compartments deeper within mature DCs (in which macropinocytosis is down-regulated). Both immature and mature DCs are capable of clathrin-coated pit-mediated uptake of SIV, supporting the notion that the receptor-mediated uptake of virus can occur readily in mature DCs. While large numbers of whole viruses were preferentially found in mature DCs, both immature and mature DCs contained similar amounts of viral RNA, suggesting that different uptake/virus entry mechanisms are active in immature and mature DCs. These findings have significant implications for cell-to-cell transmission of **HIV**-1 and SIV and support the use of AT-2 SIV, an authentic but noninfectious form of virus, as a useful tool for studies of processing and presentation of AT-2 SIV antigens by DCs.
CC Cytology - Animal 02506
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Virology - Animal host viruses 33506
Immunology - General and methods 34502
Medical and clinical microbiology - Virology 36006
IT Major Concepts
Immune System (Chemical Coordination and Homeostasis); Infection

IT Parts, Structures, & Systems of Organisms
dendritic cell: immune system, differential intracellular fate, immature, mature, viability
IT Chemicals & Biochemicals
2,2'-dithiodipyridine[AT-2]; RNA
IT Methods & Equipment
electron microscopy: analytical method; immunostaining: analytical method
ORGN Classifier
Cercopithecidae 86205
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Macaca mulatta [rhesus macaque]: female, male
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Mammals, Nonhuman Vertebrates, Nonhuman Primates, Primates, Vertebrates
ORGN Classifier
Retroviridae 03305
Super Taxa
DNA and RNA Reverse Transcribing Viruses; Viruses; Microorganisms
Organism Name
human immunodeficiency virus type 1 [**HIV**-1]: cell-to-cell transmission
simian immunodeficiency virus [SIV]: **inactivated**, infectious, whole
Taxa Notes
DNA and RNA Reverse Transcribing Viruses, Microorganisms, Viruses

L98 ANSWER 29 OF 47 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN **2002:625479** BIOSIS
DN **PREV200200625479**
TI Protection from SIV disease by vaccination with autologous dendritic cells pulsed with AT-2-inactivated whole virus.
AU Zhu, Yong-de [Reprint author]; Koo, Kevin; Sutton, William F. [Reprint author]; Kuller, LaRene; Hu, Shiu-Lok; Benveniste, Raoul; Thomas, Elaine K.; Lifson, Jeffrey D.; Haigwood, Nancy L.
CS Seattle Biomedical Research Institute, Seattle, WA, USA
SO Journal of Medical Primatology, (August, 2002) Vol. 31, No. 4-5, pp. 305-306. print.
Meeting Info.: 19th Annual Symposium on Nonhuman Primate Models for AIDS. Monterey, CA, USA. September 08-11, 2002.
CODEN: JMPMAO. ISSN: 0047-2565.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 12 Dec 2002
Last Updated on STN: 12 Dec 2002
CC General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Biochemistry studies - Proteins, peptides and amino acids 10064
Pathology - Therapy 12512
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004
Endocrine - General 17002
Pharmacology - General 22002
Virology - Animal host viruses 33506
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508
Medical and clinical microbiology - Virology 36006
IT Major Concepts
Immune System (Chemical Coordination and Homeostasis); Infection; Pharmacology

IT Parts, Structures, & Systems of Organisms
B cell: blood and lymphatics, immune system; CD4-positive cell: blood and lymphatics, immune system; T cell: blood and lymphatics, immune system; monocyte-derived dendritic cell: blood and lymphatics, immune system
IT Diseases
SIV infection: immune system disease, viral disease, simian immunodeficiency virus infection
Simian Acquired Immunodeficiency Syndrome (MeSH)
IT Chemicals & Biochemicals
GM-CSF [granulocyte-macrophage colony stimulating factor]; IL-4 [interleukin-4]; SIV antigens; autologous dendritic cells pulsed with AT-2-inactivated whole virus vaccine
IT Methods & Equipment
vaccination: immunologic method
IT Miscellaneous Descriptors
immune response; viral titer; Meeting Abstract
ORGN Classifier
Cercopithecidae 86205
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
Macaca fascicularis: host
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Mammals, Nonhuman Vertebrates, Nonhuman Primates, Primates, Vertebrates
ORGN Classifier
Retroviridae 03305
Super Taxa
DNA and RNA Reverse Transcribing Viruses; Viruses; Microorganisms
Organism Name
SIV [simian immunodeficiency virus]: mne, pathogen
Taxa Notes
DNA and RNA Reverse Transcribing Viruses, Microorganisms, Viruses
RN 83869-56-1 (GM-CSF)
83869-56-1 (granulocyte-macrophage colony stimulating factor)

L98 ANSWER 35 OF 47 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:542898 BIOSIS
DN PREV200100542898
TI In vitro **HIV** eradication by autologous CD8+ T cells expanded with **inactivated**-virus-pulsed **dendritic cells**
.
AU Lu, Wei [Reprint author]; Andrieu, Jean-Marie [Reprint author]
CS Laboratoire d'Oncologie et Virologie Moleculaire, Faculte Necker, Centre Biomedical des Saints-Peres, Paris, France
SO Journal of Human Virology, (May-June, 2001) Vol. 4, No. 3, pp. 131. print.
Meeting Info.: 2001 International Meeting of the Institute of Human Virology. Baltimore, Maryland, USA. September 09-13, 2001. Institute of Human Virology.
ISSN: 1090-9508.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 21 Nov 2001
Last Updated on STN: 25 Feb 2002
CC General biology - Symposia, transactions and proceedings 00520
Cytology - Animal 02506
Cytology - Human 02508
Pathology - General 12502
Pathology - Therapy 12512
Blood - Blood and lymph studies 15002
Blood - Blood cell studies 15004

Virology - Animal host viruses 33506
Immunology - General and methods 34502
Immunology - Immunopathology, tissue immunology 34508
Medical and clinical microbiology - Virology 36006
IT Major Concepts
Human Medicine (Medical Sciences); Immune System (Chemical Coordination and Homeostasis); Infection; Methods and Techniques
IT Parts, Structures, & Systems of Organisms
CD8 T cells: blood and lymphatics, immune system; PBMC: blood and lymphatics, immune system, peripheral blood mononuclear cell; **dendritic cells**: immune system, **inactivated** virus-pulsed; lymphoid tissue: blood and lymphatics; monocyte: blood and lymphatics, immune system
IT Diseases
HIV infection: immune system disease, viral disease, **human immunodeficiency virus** infection
HIV Infections (MeSH)
IT Chemicals & Biochemicals
adrithiol-2
IT Methods & Equipment
highly active antiretroviral therapy: therapeutic method
IT Miscellaneous Descriptors
Meeting Abstract
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human: host
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
ORGN Classifier
Retroviridae 03305
Super Taxa
DNA and RNA Reverse Transcribing Viruses; Viruses; Microorganisms
Organism Name
HIV [human immunodeficiency virus]: pathogen
Taxa Notes
DNA and RNA Reverse Transcribing Viruses, Microorganisms, Viruses

L98 ANSWER 36 OF 47 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2000:330891 BIOSIS
DN PREV200000330891
TI Enhanced binding of antibodies to neutralization epitopes following thermal and chemical **inactivation** of **human immunodeficiency virus** type 1.
AU Grovit-Ferbas, K.; Hsu, J. F.; Ferbas, J.; Gudeman, V.; Chen, I. S. Y. [Reprint author]
CS UCLA School of Medicine, 11-934 Factor Building, Los Angeles, CA, 90095, USA
SO Journal of Virology, (July, 2000) Vol. 74, No. 13, pp. 5802-5809. print. CODEN: JOVIAM. ISSN: 0022-538X.
DT Article
LA English
ED Entered STN: 2 Aug 2000
Last Updated on STN: 7 Jan 2002
AB **Inactivation** of viral particles is the basis for several vaccines currently in use. Initial attempts to use simian immunodeficiency virus to model a killed **human immunodeficiency virus** type 1 (**HIV**-1) vaccine were unsuccessful, and limited subsequent effort has been directed toward a systematic study of the requirements for a protective killed **HIV**

-1 vaccine. Recent insights into **HIV**-1 virion and glycoprotein structure and neutralization epitopes led us to revisit whether **inactivated HIV**-1 particles could serve as the basis for an **HIV**-1 vaccine. Our results indicate that relatively simple processes involving thermal and chemical **inactivation** can **inactivate HIV**-1 by at least 7 logs. For some **HIV**-1 strains, significant amounts of envelope glycoproteins are retained in high-molecular-weight fractions. Importantly, we demonstrate retention of each of three conformation-dependent neutralization epitopes. Moreover, reactivity of monoclonal antibodies directed toward these epitopes is increased following treatment, suggesting greater exposure of the epitopes. In contrast, treatment of free envelope under the same conditions leads only to decreased antibody recognition. These **inactivated** virions can also be presented by human **dendritic cells** to direct a cell-mediated immune response in vitro. These data indicate that a systematic study of **HIV**-1 **inactivation**, gp120 retention, and epitope reactivity with conformation-specific neutralizing antibodies can provide important insights for the development of an effective killed **HIV** -1 vaccine.

CC Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Pharmacology - Immunological processes and allergy 22018
Virology - Animal host viruses 33506
Immunology - General and methods 34502

IT Major Concepts
Pharmacology

IT Parts, Structures, & Systems of Organisms
dendritic cells: immune system

IT Chemicals & Biochemicals
anti-neutralization epitopes monoclonal antibodies: binding; conformation-dependent neutralization epitopes; envelope glycoproteins; gp120: glycoprotein; high-molecular-weight fractions; **human immunodeficiency virus**-1 vaccine: immunostimulant-drug; killed **human immunodeficiency virus** type 1 vaccine: immunostimulant-drug; neutralization epitopes

IT Miscellaneous Descriptors
cell-mediated immune response; vaccine development

ORGN Classifier
Retroviridae 03305
Super Taxa
DNA and RNA Reverse Transcribing Viruses; Viruses; Microorganisms
Organism Name
human immunodeficiency virus-1: chemical **inactivation**, thermal **inactivation**
Taxa Notes
DNA and RNA Reverse Transcribing Viruses, Microorganisms, Viruses

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(FILE 'HOME' ENTERED AT 10:36:24 ON 03 FEB 2004)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 10:36:34 ON 03 FEB 2004
E DENDRITIC CELL/CT
E E3+ALL
L1 529 S E8,E9
L2 7326 S E7
L3 45 S E13
L4 7836 S L1-L3
L5 11672 S DENDRITIC CELL

```
L6        11672 S L4,L5
                E HIV/CT
                E E3+ALL
L7         9029 S E2
                E E6+ALL
L8        12470 S E7,E8,E9,E10
L9        19620 S E6
                E E5+ALL
L10       16484 S E6
L11       36735 S E5+NT
L12         635 S L6 AND L7-L11
L13         639 S L6 AND HIV
L14         613 S L6 AND HUMAN IMMUNODEFICIEN? VIRUS
L15         798 S L12-L14
L16          32 S L15 AND INACTIV?
L17          58 S L15 AND PULS?
L18           7 S L16 AND L17
                E CD8/CT
                E E10+ALL
L19        8218 S E20
L20          84 S L15 AND L19
L21         150 S L15 AND CD8
L22         150 S L20,L21
L23          20 S L22 AND L16,L17
L24           3 S L18 AND L23
L25           4 S L18 NOT L24
L26           7 S L24,L25
L27          17 S L23 NOT L26
                SEL DN AN 6 14 15 16 17
L28           5 S E1-E15 AND L27
L29          12 S L26,L28
L30          35 S L17 NOT L23-L29
                SEL DN AN 25
L31           1 S E16-E18
L32          13 S L29,L31
L33           1 S US20040009194/PN OR US2002-390625#/AP,PRN
                E ANDRIEU J/AU
L34          95 S E3,E6,E7,E12,E13,E17
                E LU L/AU
L35         437 S E3-E26
                E LU LOUIS/AU
L36           5 S E3,E4
L37           4 S L15 AND L34-L36
L38           4 S L34 AND L35-L36
L39          19 S L32,L33,L37,L38
L40          15 S L39 AND ?ACTIV?
L41           4 S L39 NOT L40

     FILE 'HCAPLUS' ENTERED AT 10:59:40 ON 03 FEB 2004

     FILE 'MEDLINE' ENTERED AT 11:04:22 ON 03 FEB 2004
                E DENDRITIC CELL/CT
                E E5+ALL
L42        9140 S E10
L43       14071 S DENDRITIC CELL
L44       14071 S L42,L43
L45         878 S L44 AND HIV
                E HIV/CT
                E E3+ALL
L46         564 S L44 AND E14+NT
                E HIV/CT
L47         162 S L44 AND (E53+NT OR E28+NT)
L48           0 S L44 AND E114+NT
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L49          38 S L44 AND E89+NT
L50          63 S L44 AND E149+NT
L51          10 S L44 AND E191+NT
L52           0 S L44 AND E216+NT
                E E231+ALL
L53         492 S L44 AND E16+NT
                E E46+ALL
L54           3 S L44 AND E14+NT
                E HIV INFECTION/CT
L55          13 S L44 AND E76+NT
L56          11 S L44 AND (E102+NT OR E104+NT)
L57           9 S L44 AND E166+NT
L58          31 S L44 AND E173+NT
L59           0 S L44 AND E206+NT
L60           0 S L44 AND E230+NT
                E E257+ALL
                E E23+ALL
L61         138 S L44 AND E20+NT
L62          37 S L44 AND (E41+NT OR E42+NT OR E43+NT OR E44+NT OR E45+NT)
L63         320 S L44 AND HUMAN IMMUNODEFICIEN? VIRUS
L64         927 S L45-L63
L65          29 S L64 AND INACTIV?
L66          64 S L64 AND PULS?
                E CD8/CT
                E E12+ALL
L67         134 S L64 AND E17+NT
L68          29 S L67 AND L65,L66
L69           7 S L65 AND L66
L70           3 S L68 AND L69
                E IMMUNITY/CT
                E E12+ALL
L71      173712 S E4+NT
L72         203 S L71 AND L64
L73           9 S L72 AND L65
L74          24 S L72 AND L66
L75          63 S L72 AND L67
L76          12 S L75 AND L73-L74
L77          12 S L70,L76
L78          26 S L69,L73,L65 NOT L77
                SEL DN AN 1 2
L79           2 S L78 AND E1-E6
L80          14 S L77,L79
L81          14 S L80 AND L42-L80
                E ANDRIEU J/AU
L82         208 S E3,E5,E8,E9
                E LU L/AU
L83         833 S E3-E26
                E LU LOUIS/AU
L84           1 S E3
L85          63 S L82,L83,L84 AND L44
L86           3 S L85 AND L64
L87          15 S L81,L86

     FILE 'MEDLINE' ENTERED AT 11:19:27 ON 03 FEB 2004

     FILE 'BIOSIS' ENTERED AT 11:19:41 ON 03 FEB 2004
L88       16406 S L43
L89         959 S L88 AND (HIV OR HUMAN()(IMMUNODEFICIEN? OR IMMUN# DEFICIEN?)(
L90        1048 S L88 AND RETROVIRIDAE+NT/BC
L91        1048 S L88 AND RETROVIRIDAE+NT/ORGN
L92         215 S L90,L91 NOT L89
L93          12 S L92 AND INACTIV?
                SEL DN AN 5 12
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L94           2 S E1-E4
L95         833 S L89 AND L90,L91
L96          28 S L95 AND INACTIV?
L97          30 S L94,L96

     FILE 'HCAPLUS, MEDLINE, BIOSIS' ENTERED AT 11:24:53 ON 03 FEB 2004
L98          47 DUP REM L40 L87 L97 (13 DUPLICATES REMOVED)

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Stedman's Medical Dictionary 27th Edition

autologous (aw-tol'o-gus)

1. Occurring naturally and normally in a certain type of tissue or in a specific structure of the body. **2.** In transplantation, referring to a graft in which the donor and recipient areas are in the same individual, or to blood that the donor has previously donated and then receives back, usually during surgery. **3.** Sometimes used to denote a neoplasm derived from cells that occur normally at that sight, e.g., a squamous cell carcinoma in the upper esophagus. SYN: autogenous (1) . [auto- + G. *logos*, 1 relation]

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